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Managerial engagement with climate change in small and medium-sized enterprises

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A thesis submitted for the degree of Doctor of Philosophy
Business and Management

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Abstract

If the response to climate change is to include a transition to a low carbon economy, then the role of small businesses will be vital. As employers, innovators, polluters and carbon users, small businesses have significant combined impacts and opportunities. Within the framework of ecological modernisation, government policy has taken a largely voluntary approach to engaging small businesses with pro-environmental behaviour. Research has consistently found small businesses to be resistant to business greening and taken a predominantly positivist approach to identifying the barriers and drivers to behaviour and to measuring the effectiveness of different policy measures. In this study, the Schwartz Value System (SVS) is used within a qualitative research design to contribute new insight into how managers make sense of climate change. The thesis demonstrates the role of values in sensemaking and the need to engage with individuals within small businesses through the value-based frames they hold.

In particular, this research shows that the win-win approach aimed at encouraging SMEs to save money, save the planet through voluntary engagement strategies over-simplifies managerial motivation. The managers in this study drawing on the self-enhancing value of Power most clearly reflected win-win ideas, except that they encapsulated the save money but not the save the planet message. Environmental protection, found within Universalism values, was only demonstrated by managers drawing on Achievement. In making sense of climate change, managers constructed their ideas using a mix of self-enhancing, self-transcending, open and conservation values. To fully engage SME managers with climate change, policy makers need to take a more sophisticated approach to explicitly engaging with values.

Chapter 1: Introduction and background

1.1 Aims and rationale for the research

This research investigates how managers of small and medium sized enterprises (SMEs) engage with climate change. The research aims to understand (1) how SME managers make sense of the complex problem of climate change in the context of their businesses and their own lives; (2) how they approach pro-environmental or 'greening' behaviour in their businesses; and (3) the values they draw on to articulate their sense of climate change and their business greening.

Climate change can be regarded as the greatest environmental challenge facing the world today (DEFRA, 2009; Stern, 2007; Hansen et al., 2000) and is a key focus of international, European and UK policy. In the UK Sustainable Development Strategy of 2005, sustainable production and consumption, together with climate change and energy, were listed as key priorities. EU policy highlights the importance of business in contributing to a more rational use of natural resources and reduced levels of pollution (Commission of the European Communities, 2006). The importance given to climate change in national policy is underlined by the Climate Change Act 2008 and establishment of the Department of Energy and Climate Change (DECC) in 2008 (Keskitalo and Carina, 2010; Sinha, 2010).

Small and medium sized enterprises have an important but sometimes underplayed role in responding to climate change. Attention is often focused on the environmental impacts of large corporations, but collectively, SMEs make a major contribution to greenhouse gas emissions and to potential solutions to climate change related problems. Many SMEs are also particularly vulnerable to the consequences of climate change, both in terms of gradual changes to climate change sensitive life systems and in terms of the risks posed by sudden and unpredictable climate change related events, such as extreme weather. However, most

of the research literature regarding the environmental performance of business looks to identify the drivers and barriers to improvements within large companies (Carr, 2003; Spence and Rutherford, 2003). Where researchers have looked at pro-environmental business changes or 'business greening' (Fineman, 2000) in the context of SMEs, it has mostly been reported that environmental issues are neglected (e.g. Bradford and Fraser, 2008; Revell and Blackburn, 2007; Committee on Climate Change, 2008).

Early research generally reported that most SMEs were unwilling and/or unable to take on board environmental concerns (e.g. Tilley, 1999a). Environmental issues in general and climate change in particular were not viewed as business issues. While Blundel and Gray (2011) more recently found 23% of SMEs in their online survey highly sceptical of environmental benefits, the picture is unclear with some suggestion that SME engagement with the environment is changing (Revell et al., 2010). Certainly, within the last five years, the environment seems to have become increasingly recognised by businesses of all sizes, including SMEs, to be part of the normal business agenda (Hofmann et al., 2012).

1.2 Policy background

The overarching legislative framework within which climate change policy in the United Kingdom is set is the Climate Change Act of 2008. One of the key stated aims of the Act is to promote the transition to a low carbon economy. The Act set a legally binding target of an 80% reduction in carbon emissions by 2050 and introduced a carbon budgeting system. The UK Climate Change Act was, at the time, described by UNICEF as the "world's strongest piece of national climate change legislation" (Reeves, 2008, p3). In addition to the formation of the Department of Energy and Climate Change (DECC) in 2008, further responsibilities for business and environmental issues also lie with the Department for Business, Innovation and Skills (BIS) and the Department for Environment, Food and Rural Affairs (DEFRA).

Although many environmental regulatory provisions do not apply to businesses under a certain size, small businesses are still subject to a significant amount of environmental regulation. Increasingly, there is also evidence that SMEs appear to be experiencing regulatory pressure through the supply chain and the Carbon Reduction Commitment (CRC) (see www.ukcrc.co.uk for details) to address carbon emissions (Vickers et al., 2009) more specifically. Supply chain pressure is now considered to be one of the most important drivers for SMEs initiating greening changes within their business (Blundel et al., 2013; Andić et al., 2012).

However, the main thrust of the UK government's approach to improving SME environmental and carbon performance is based on voluntary measures. This voluntary approach is supported by the argument that increasing environmental and, particularly, energy efficiency will reduce businesses' costs and thus improve their profitability and competitiveness. This business case for environmental improvement, also referred to as the win-win argument (Vickers et al., 2009), is reviewed in more detail in section 2.3. Policies to address climate change can be seen as an extension of older approaches towards encouraging environmental improvements within SMEs. Policies to encourage waste minimisation (from the late 1990s), resource efficiency (from the mid-2000s) or carbon reduction (from the late 2000s to the present day) all rely on the win-win message; in other words, that business can save money by making environmental improvements. Best practice case studies are used to demonstrate to businesses what can be achieved (Contantinos et al., 2010; Spence, 2007).

The UK Low Carbon Transition Plan (HM Government, 2009) is the 'national strategy for climate and energy' and explains how the UK Government intends to tackle climate change under sections 12 and 14 of the Climate Change Act (2008). The then Secretary of State for Energy and Climate Change, Ed Miliband, states in the introduction to the plan that "the transition to a low carbon economy will be one of the defining issues of the 21st Century...with

the discipline of carbon budgets, legally binding limits on emissions; we plan to drive change in every area...” (HM Government, 2009, p5).

The focus of the Transition Plan is on energy efficiency and identifies a number of key obstacles to business engagement. These barriers include businesses’ lack of strategic prioritisation and understanding of the need to reduce emissions; secondly, the variety of individual business solutions needed; thirdly, a reluctance to commit to using new technologies and unproven ideas; and finally, a lack of resources, both financially and in terms of skills, to support change.

Vickers et al. (2009), in a report for the then Department for Business Enterprise and Regulatory Reform (BERR), focus on SMEs as part of the transition to the low carbon economy. The report reviews current thinking and literature from an innovation and learning capabilities perspective, in order to identify opportunities, issues and challenges for SMEs. They find that most recent literature sees ‘the transition’ as driven by government regulations and frameworks. The authors also view the aims of the low carbon economy as being ‘closely aligned’ with sustainable development, but recognise this as ‘heavily contested’ with the ‘degree and nature’ of government intervention and ideas about economic growth, wealth creation, equity and consumerism ‘subject to ongoing disagreement and debate’ within the academic literature (Vickers et al., 2009, p10).

Raingold (2009) describes the UK Climate Change Act (2008) as setting ‘ambitious legally binding targets for reducing greenhouse gas emissions... (and) commits the UK to a radical transformation ... required to meet the global challenges of climate change, energy security and sustainable development (Raingold, 2009, p5)’. The report, on behalf of the Aldersgate

Group¹, refers to the role of the UK Low Carbon Transition Plan (HM Government, 2009) and affirms the view that 'the role of good regulation in forcing the pace of industrial change is now a central element of economic policy.....the government cannot rely on the market to respond to low carbon targets at the required scale and urgency' (ibid, p8), and that 'the government should ensure that its low carbon agenda is made accessible to short-term corporate strategies to help reduce energy costs and address climate risks and opportunities' (Raingold, 2009, p15).

In order to achieve business engagement with environmental and, specifically, climate change issues, a number of business support organisations and mechanisms have been established, some of them specifically aimed at supporting small businesses. A detailed review of all organisations and schemes that can provide environmental support for SMEs is beyond the scope of this chapter and not necessary to the further development of the dissertation. Only a small selection of organisations and some of their activities are introduced here for illustration. The Carbon Trust (www.carbontrust.co.uk) was originally established as a not-for-profit company by the UK government to provide specialist support to help predominantly larger business and the public sector cut carbon emissions, save energy and commercialise low carbon technologies and thus foster the transition to a low carbon economy. A number of voluntary organisations also provide environmental advice and support for small businesses. For example, Groundwork UK, a national environmental regeneration charity, provides environmental business support and advice in partnership with local projects and groups. To give an indication of the activities of such support organisations, the Bedfordshire Green Business Network (GBN) ran a seminar for members in February 2010 on the implications of the Carbon Reduction Commitment for small businesses.

¹The Aldersgate Group is a coalition of progressive business, environmental groups and MPs who believe that high environmental standards will be a major part of future economic growth and international competitiveness.

Similarly in April 2010, a second GBN seminar focused on carbon footprinting using the DEFRA voluntary 'Guidance on How to Measure and Report Your Greenhouse Gas Emissions' introduced in July 2009 (DEFRA, 2009).

1.3 Ecological modernisation

Public policy aimed at improving business environmental performance and achieving the transition to a low carbon economy is situated within the theoretical framework of ecological modernisation. Ecological modernisation is a set of ideas that has become dominant in academic and political discourse on the relationship between economy and environment. The basic assumption is that conflict between economic development and environmental protection is not inevitable (Weale, 1992). It stands in contrast with earlier (but ongoing) 'deep-green' environmental debates focusing on de-modernisation, de-industrialisation or counter-productivity (Mol and Spaargaren, 2000). Ecological modernisation focuses on policies that incentivise business to contribute solutions to environmental problems in return for growth and improved competitiveness.

Young (2000) identifies eight features of ecological modernisation thinking: (1) longer-term corporate perspectives to reconcile economic and environmental objectives; (2) new corporate strategies that integrate environmental objectives; (3) integration of environmental and economic principles in government policy; (4) new policy tools to facilitate such integration; (5) a more open and inclusive approach to policy making with a focus on partnerships and participation; (6) a central role for science and technology; (7) private sector influence on policy-making; and (8) a different, more environmentally benign type of economic growth.

Ecological modernisation is attractive to both governments and industry as it is seen to address environmental problems but without the need for fundamental social change (Young,

2000). For example, ecological modernisation favours solving ecological problems within existing social and economic structures through new, clean technologies over the kind of fundamental changes to society and economic activities proposed by 'deep ecology' (Naess, 1973) or 'small is beautiful' arguments (Schumacher, 1973). Hence there is a central role for science and technology in ecological modernisation (Hannigan, 1995). Ecological modernisation thought can go hand-in-hand with an assumption that better ecological efficiency and environmental innovation can lead to greater productivity, which can make it attractive to industry (see Porter and van der Linde, 1995; Elkington, 1994 for these arguments).

'Weak' and 'strong' (Christoff, 1996) or 'techno-corporatist' and 'reflexive' (Hajer, 1995) forms of ecological modernisation have been distinguished. In its weak form, ecological modernisation has been criticised for enabling capitalism to continue as usual with 'lip service' being paid to environmental ideas (Christoff, 1996); for being built on unrealistic and unworkable premises (Pepper, 1999); or even as a way in which business has hijacked the environmental agenda, using ecological modernisation rhetoric to disguise what is essentially business as usual (Welford, 1997). In its strong or reflexive form, it has been seen as an opportunity to embrace environmental improvements into a reforming agenda that facilitates the modernisation of industry in a way that can fit with business models (Mol and Spargaren, 2000). In other words, ecological modernisation can be seen as either a selling out of radical environmental ideas that mutes the power of environmental groups, or as part of a more reformist approach by government that accepts the arguments of those groups that a new approach is needed to address the environmental damage caused by industry.

Ecological modernisation represents the dominant approach of governments throughout industrially developed nations to engaging business with environmental improvements (Weale, 1992; Revell, 2007) although the pace and scale of uptake has varied between

nations (Young, 2000). Arguments that businesses, including small businesses, can gain commercially from adopting pro-environmental practices – the so-called win-win argument – is at the core of EU strategy for a resource efficient Europe that promotes jobs and growth (EU Communication, 2011). A recent European report prepared for the Directorate-General for Enterprise and Industry (Contantinos et al., 2010), also advocates the advantages of a win-win approach and promotes this through the use of case studies from 13 countries that show how SMEs ‘transform environmental challenges into business opportunities’ (ibid, p8).

The dominance of the ecological modernisation discourse in industry and government has attracted criticism. Grist (2008) argues that ecological modernisation discourse perpetuates a growth orientation in business and thus reduces the opportunity for more radical debates while limiting changes in behaviour. According to Revell (2007), a key challenge to ecological modernisation theory is that managers are unlikely to make longer term environmental investments or aim for improvements beyond initial quick wins, and that policies based on voluntary efforts encourage managers to continue to see environmental issues as peripheral. Spence (2007) argues that trying to engage SMEs with environmental and social responsibility on the basis of win-win arguments is based on the fundamentally incorrect assumption that SME managers are mainly motivated by profit maximisation and competitive advantage. There is also empirical evidence that SMEs are often sceptical of the win-win argument and slow to be motivated by commercial arguments for making business greening changes (e.g. Tilley, 1999b; Simpson et al., 2004). This literature is reviewed in more detail in section 2.3.

These criticisms notwithstanding, the ecological modernisation approach has met with some success. For example, Gibson (2001) reports that the UK government’s Environmental Technology Best Practice Programme, Envirowise, had helped UK manufacturing companies to make environmental efficiency savings of £125 million per year through the reduction of

raw materials and waste. Similarly, a waste minimisation project aimed at larger food and drinks companies in East Anglia reported business savings of £1,100,000 per year along with environmental benefits, such as a reduction in carbon dioxide emissions of 665 tonnes per year; a reduction of 1,400 tonnes of reduced raw materials and a reduction of 1,370 tonnes of solid waste to landfill (Hyde et al., 2000). Other projects aimed at SMEs have seen more mixed results although some successes were achieved. For example, Simpson et al. (2004) reported that a South Yorkshire SME project had largely failed to engage SMEs with the idea of achieving competitive advantage through environmental efficiency but that a number of 'notable exceptions' did make improvements. Despite predominantly 'resistant' or 'reactive' environmental strategies exhibited by SMEs, Tilley (1999b) argues that by bringing profit motivations together with the principles of environmental responsibility, ecological modernisation can empower SMEs to adopt sustainable practices and changes the wider society within which SMEs operate. This moves the macro relationship between business and the environment from an adversarial to consensual position while providing SMEs with the tools they need to adapt.

While there are mixed views on the effectiveness and appropriateness of the ecological modernisation approach to encouraging environmental and climate change engagement in small businesses, ecological modernisation remains the dominant approach in government policy and is prominent in academic work on environmental management and change in business. Alternative conceptions of how climate change might be approached by businesses are relatively underexplored and there is a scarcity of research aiming to understand how environmental and climate change problems are approached from the perspective of managers themselves.

1.4 Distinctive characteristics of SMEs

This dissertation assumes that small and medium sized businesses are different from large businesses and need to be studied within their own context. SMEs have a number of organisational and contextual characteristics which distinguish them from larger companies and affect the way in which they respond to environmental and social issues. These differences mean that research findings of studies using larger firms as well as theoretical models and policies designed for large firms are often not easily transferred to small companies (Spence, 2007). SMEs are less likely to have formalised structures and strategies (Hammann et al., 2009) and are therefore less likely to have codified social or environmental policies (Spence, 2007). SMEs are often private enterprises, run by owner-managers, who have greater freedom of decision making (Hammann et al., 2009) and whose personal responsibility and personal motivations tend to play an important role in the strategic direction of the business (Hammann et al., 2009; Vives, 2006; Jenkins, 2004; Spence, 1999). In addition, SMEs are often more strongly embedded in their local society and culture (Spence, 2007) and more reliant on personal relationships (Hammann et al., 2009). SMEs are also often highly dependent on a small number of customers and generally not able to compete on price with larger companies (Spence, 2007, p536-8). They can suffer from greater constraints in financial and managerial resources than their larger counterparts, which can act as a barrier to environmental engagement (Hammann et al., 2009; Biondi et al., 2000; Gerrans and Hutchinson, 2000; Hillary, 1999; Netherwood, 1998; Tilley, 1999a). This often means that small firms are vulnerable to non-compliance with environmental regulation (Petts et al., 1998) and find expectations for adopting environmental improvements challenging (Hitchens et al., 2005; Tilley, 1999a). Therefore SMEs are traditionally seen as reactive rather than proactive in their environmental engagement (Tilley, 2000), and have been found to be unconvinced of the business case for greening (Revell and Blackburn, 2007). These are some of the main characteristics of SMEs. See section 2.4.3 for further discussion of SME characteristics.

1.5 SMEs and climate change

The SME characteristics outlined in the previous section mean that there may be both challenges and benefits for SMEs in terms of dealing with climate change. The issues and risks arising out of climate change are a key sustainable development issue for SMEs in terms of both mitigation and adaptation (Gadenne et al., 2009; Vickers et al., 2009; Revell and Blackburn, 2007). SMEs are affected by climate change in three main ways:

1. SMEs are called upon to reduce their energy consumption and greenhouse gas (GHG) emissions as an important aspect of overall efforts to mitigate the magnitude of climate change.
2. SMEs are seen as a key driver of technological and social innovation that can help societies to adapt to the consequences of climate change.
3. SMEs need to increase their own resilience to the consequences of climate change to reduce the risk to their own survival. In doing so they also play a role in safeguarding important social benefits in terms of job creation, innovation, diversity, social cohesion and growth.

SMEs contribute to environmental burdens and greenhouse gas emissions attributable to industry. They are estimated to contribute to 64% of overall environmental damage in Europe (Contantinos et al., 2010, p58) and may account for 20% of total UK carbon emissions (AXA, 2008). It is therefore important to address the collective impact of SME activity on sustainability in general and climate change in particular (Gadenne et al., 2009; Revell and Blackburn, 2007).

SMEs also have a critical economic role. The EU considers SMEs as the backbone of the European economy and a key component of viable communities (European Commission, 2012). They provide two thirds of EU private employment and more than 50% of the value-

added created in the EU (European Commission, 2012). In the UK they constitute 99% of all businesses and provide 43% of private employment (BERR, 2007).

SMEs can be highly vulnerable to the consequences of climate change but past research has found them to be generally inadequately prepared for these challenges (Crichton 2009; Clemo, 2008). They experience the same environmental risks as big companies but often lack the skills, knowledge or resources to plan, respond and recover from those events (Sullivan-Taylor and Branicki, 2011; Ingirige et al., 2008). In this sense, SMEs show little resilience to environmental threats: that is to say, a low ability to return to a stable state in response to turbulence and discontinuity (Bhamra et al., 2011) and are likely to be affected disproportionately worse than larger companies with an increased risk of business failure (Wedawatta et al., 2010; Ingirige et al., 2008). This makes SMEs a highly important group in terms of their economic, social and environmental impact. It also suggests a clear need to address the collective environmental impact of SME activity in general and on climate change in particular (Gadenne et al., 2009; Revell and Blackburn, 2007).

The UK government and the European Union have invested significant resources to encourage SMEs to reduce carbon through voluntary approaches based on win-win arguments (NAU, 2010), as outlined in section 1.2 above. However, these schemes have met with limited success (Vickers et al., 2009; Revell and Blackburn, 2007) due to a lack of awareness of their environmental impacts, limited managerial resources and a sense that cost savings could be more easily achieved elsewhere (Gadenne et al., 2009; Revell and Blackburn, 2007; Purvis, 2000; Petts, et al., 1998). Private policy makers, such as insurers, are also concerned about SME resilience to climate change (Crichton, 2009; Clemo, 2008).

Some SMEs, however, have engaged more strongly with social and environmental issues (Brammer et al., 2011; Cassells and Lewis, 2011). This often seems due to managers' values

rather than strict cost-benefit calculations as implied by the win-win rhetoric (Williams and Schaefer, 2013; Lawrence et al., 2006). In a small qualitative study, Williams (2009) found that nine managers of SMEs demonstrating a number of proactive environmental behaviours viewed climate change as an environmental and social issue that they could relate to at emotional, ethical and business levels. Other studies have linked resilience to climate change to motivations and values (Keong and Mei, 2010) and to the leadership of organisations (Vargo and Seville, 2011). It has been argued that the values of owner-managers of SMEs are likely to influence SME behaviour due to their relatively greater strategic and operational control over their firms (Hammann et al., 2009; Heugens et al., 2008).

This section has outlined some of the more recent research on SME engagement with environmental concerns in general, and climate change in particular. There is a need to revisit SME understanding of climate change and gain a fresh, in-depth picture of how managers make sense of this challenge. As will be discussed in greater detail in Section 2.4, the influence of managerial values in particular would seem to warrant closer examination.

1.6 Scope and aims of this research project

The scope of this study is to explore managerial engagement with climate change. Adopting an interpretivist approach to knowledge (Bryman, 1984), the aim is to understand how SME managers make sense of climate change; how this relates to how they make sense of business greening and what this may mean for how they engage with pro-environmental actions.

The research addresses a number of gaps in the literature, which are identified in this and the next chapter. In summary these gaps are as follows:

- Government policy and much research on SME engagement with environmental and climate change issues starts with an expert – scientific and/or policy – view of what climate change is and how it needs to be addressed by small businesses. There is little research that aims to understand the meaning of climate change to SME managers from their own perspective.
- The dominant approach to encouraging business greening is ecological modernisation. While there is some evidence that SME managers tend to be sceptical of the win-win arguments based on that approach, there is relatively little existing research on any alternative ways in which managers themselves may understand and approach environmental and climate change issues. In particular, values based approaches to addressing environmental and climate change issues in small businesses tend to be under-explored.
- While there is some recognition in the literature that personal values play a role in SME engagement with environmental concerns, there is virtually no existing in-depth research into the type or nature of the values that managers might draw upon in their response to environmental challenges or how such values might be reflected in their business actions.

In order to address the above gaps in knowledge, this study poses the following three main research questions:

1. How do SME managers make sense of the complex problem of climate change?
2. What business greening behaviour have they adopted in their businesses and what are their motivations for doing so?
3. What values do they draw on to articulate their sense of climate change and their approach to business greening?

1.7 Organisation of the dissertation

The dissertation is organised in seven chapters.

Chapter 1 has introduced the research objectives and questions and their importance from an academic and policy perspective. It has introduced the policy context in which the research is set, as well as part of the theoretical context in terms of ecological modernisation theory, the characteristics of small and medium sized enterprises and their relationship to climate change.

Chapter 2 provides a critical review of the academic literature on SMEs' engagement with environmental issues and their motivations for business greening. The chapter then reviews the role of values in behaviour before discussing lay perspectives on climate change.

Chapter 3 is the methodology chapter. The ontological and epistemological approach taken in this research is discussed along with the research design and methods employed. In particular, it sets out how the Schwartz Value System has been used to help identify, map and explore values in the context of a sensemaking approach.

Chapters 4, 5 and 6 report on the findings of the research. Chapter 4 looks in depth at the values on which managers drew in order to articulate their sense of climate change and their approach to business greening.

Chapter 5 investigates how managers make sense of climate change.

Chapter 6 looks at how managers act on climate change and their approach to business greening.

Chapter 7 provides the conclusion to the research. It summarises the main research findings and discusses the implications for research, policy and practice. The chapter also makes suggestions for future research avenues and summarises the contribution of the research.

Chapter 2: Motivation to engage with environmental issues

2.1 Introduction

This chapter provides a critical review of recent research regarding the motivation of SME managers to engage with environmental issues. The critique leads from the firm to the individual as the level of analysis and in particular explores the role of values. Research exploring the lay understanding of climate change is explored with particular reference to business. As discussed in Chapter 1, much of the research conducted in this area has been closely linked to policy-making (e.g. Contantinos et al., 2010; Vickers et al., 2009). In this, there has tended to be a focus on the effectiveness of different policy instruments and the drivers and barriers to their uptake at the level of the organisation. The broad types of policy instrument – regulation, economic/financial incentives, and education/capacity-building (Blundel et al., 2012) – make implicit and/or explicit assumptions about the motivation of SME managers. This chapter will consider the research evidence related to these different approaches and draw out any underlying assumptions about the motivation of SME owners and managers. In order to keep the review to a manageable length, the main critiques are based on the work of the leading authors, with additional citations being provided to indicate the wider body of research in each area. Although previous research often acknowledges that SMEs are motivated by more than one idea, there has been a common tendency amongst researchers and policy makers to take a positivist approach and place emphasis on particular tools that are seen to drive behaviour. By positivist I mean that the research approach has been based largely on quantitative data with a lesser concern for understanding the issues identified at an in-depth, individual level. For example, regulation is often promoted as the most important driver despite limited success (Simpson et al., 2004; Bradford and Fraser, 2008; Gadenne et al., 2009; Masurel, 2007).

Given its prominence in the literature, section 2.2 begins with a critical review of research that focuses on legislation, most of which operates at the level of the organisation. Section 2.3 undertakes a similar review of economic / market-based motivations encapsulated in the win-win business case. Section 2.4 explores individual motivation for greening. In doing so, it engages with an emerging body of research that acknowledges the importance of the motivation of individual SME owners and managers, and which implies a deeper, more individual approach to engagement. Section 2.5 extends the individual-level focus by looking specifically at recent research on public engagement with climate change and a much more limited literature that has specifically examined how SME managers have engaged with this phenomenon. Section 2.6 comprises a short concluding discussion that draws out the key findings.

2.2 Compliance with regulation as a motivation

2.2.1 The importance of regulatory measures

Most empirical studies support the idea of regulation as one of the main drivers for SMEs to engage with environmental issues. For example, Petts et al., (1998) in reviewing the earlier literature from 1992, found that some 20 surveys in five years had identified compliance with legislation as the key reason for SME engagement with greening. Later studies also support the 'regulation driver' as a key reason for businesses to improve their environmental performance (e.g. Hofmann et al., 2012; Babiak and Trendafilova, 2011; Contantinos et al., 2010; Vickers et al., 2009; Gadenne et al., 2009). These studies focus on the 'business' as the unit of research and assume that the individual responding to the survey speaks for the whole firm. In their review of the business greening literature between 1994 and 2010, Shi and Lai (2012) also concluded that there was a prevalence of survey methods, with the unit of analysis at the firm level.

In surveying the literature on SMEs and the environment, Vickers et al. (2009) find that *'regulation is seen in much of the literature as playing a crucial role'* (ibid, p37) but there are *'low levels of compliance due to a lack of awareness combined with a perception and/or reality that enforcement is weak'* (Vickers et al., 2009, p22). Petts et al. (1998) describe this kind of response as *'vulnerable compliance'* where managers want to do the right thing but do not have the capacity to know whether they are. This, the authors (ibid) suggest, makes legislative compliance a poor driver of environmental change. However, this section will not debate the effectiveness of environmental legislation per se. Instead this section will critically investigate the studies that have identified legislation – or compliance in other forms – in order to explore how compliance may be understood as a motivation for greening by SME managers.

2.2.2 Critiques of regulation-based interventions

In section 1.3, the policy context was set within the framework of ecological modernisation. It was explained that policies designed to engage larger business with pro-environmental behaviour were applied to smaller business. Similarly, environmental legislation is not designed specifically for SMEs (Simpson et al., 2004) and can be both difficult for SMEs to apply and for regulators to enforce. The SME population encompasses a wide diversity of businesses in terms of firm size, industry sector, organisational type, and geographic location. This can make regulation difficult for a number of reasons. For example, regulators can lack the capacity to police the sheer number of small firms and their diversity. Similarly, SMEs are found to lack the knowledge and resources to comply, while perceptions of low enforcement may reduce non-compliance as a threat (Jenkins, 2006; Revell and Blackburn, 2004).

As discussed in section 1.3.2, SMEs are not the same as large companies and cannot be expected to respond in the same way. SMEs can be difficult and expensive to regulate and

can be unclear about what regulations apply to them (Cassells and Lewis, 2011). Bradford and Fraser, (2008) argue that legislation is seen by SMEs as the best way to motivate a change in the behaviour of small firms. Conversely, Baden et al. (2011), argue that SMEs find legislation as bureaucratic and burdensome. This suggests there is a need to explore in more depth how compliance with legislation is understood by individual managers within the firm and how compliance helps these key individuals to make sense of their approach to business greening.

Greater insight on regulation as a motivation at the individual level may be gained through organisational research on the role of emotions. Research by Stephen Fineman, one of the leading researchers on emotion in business, has used qualitative methods to explore the emotional meanings that managers in regulated industries co-create with Environment Agency officers regarding environmental legislation². In England and Wales, the Environment Agency is responsible for 'policing' (Fineman, 2000b, p109) environmental legislation. Fineman argues that while the basic model of legislation is one of input-output: input regulations to output a desired behaviour - in practice this is oversimplified because all key actors are complex emotional individuals (Fineman, 2001, p7). He explains that managers hear messages regarding the environment and business from different sources (Fineman, 1996, p480) and argues that it is the relationship between manager and Environment Agency officer that 'negotiates' engagement with greening (Fineman, 1998, p954). In terms of engagement with legislative compliance, Fineman argues that the primary motivation for firms to engage is to avoid the fear of personal, commercial, financial and other penalties (1996, p.46). While he finds the role of regulation in coercing change to be important (Fineman,

²Fineman does not refer specifically to SME managers. However, although Fineman's empirical research is mainly located in larger firms such as UK supermarkets and the UK automotive industry (1996; 1997), his focus on the individual as the primary unit of analysis makes his findings relevant to this study. (Research at the individual level will be discussed in section 2.4.)

1996, p496), he is also critical of the role of the Environment Agency officer as a shallow enforcer (Fineman, 2000, p62) with any thought of legislation as offering businesses a 'level playing field' erroneous. Fineman argues that the lack of standardisation is due to the individual relationships that managers, within different businesses and different sectors, have with their enforcers (Fineman, 2000, p70).

As part of five studies exploring the factors influencing SME responsiveness towards greening in the UK manufacturing sector, Williamson et al. (2006) argued that regulation is '*fundamental*' as a driver for environmental improvement because it '*bridges the gap between firms' profit orientated self-interest and the interests of society*' (p326). While the authors did not see legislation as necessarily effective in maintaining long-term motivation, similar to Fineman (1996, p496) they also found compliance to be motivated by a fear of punishment (Williamson et al., 2007, p324). However manager behaviour was seen by the authors to be more complicated than it first appeared: while market-based ideologies could reduce the motivation of managers to go beyond compliance, it was clear that there were still firms who did go beyond what was required of them (Lynch-Wood and Williamson, 2007, p324). Similar to Lynch-Wood and Williamson (2007), other authors have suggested that compliance can act as a 'ceiling' to reduce further motivations (e.g. Baden and Harwood, 2011; Spence et al., 2000) and discourage experimentation (Spence et al., 2000, p960), but that some firms do still do more (Williams and Schaefer, 2013). These findings may suggest a need to explore in greater depth the complexity of individual behaviour and make explicit the value assumptions inherent in market ideas.

Williamson et al. (2006) also looked to explain the feelings and values associated with environmental actions. Again, the focus was at the level of the organisation rather than looking at individual managers and how they described these feelings and values. In seeking to explain how external drivers affect decision making, they found that general free-market

values and attitudes were shown by the majority of the 31 companies in their sample. Free-market values were seen by the authors as reflecting the dominant free-market ideology and were described in three ways: firstly, a firm focus on the identification of cost savings and responding to cost reduction; secondly, responding to the supply chain and thirdly, responding to regulation (2006, p326). The authors explain that the first two values relate to the market and the third to correcting market failure. The conclusion suggested Lynch-Wood and Williamson in a later paper (*ibid*, 2007, p61) is that for most SMEs, the clearest signal that society can offer is through regulation which allows small firms to demonstrate their legitimacy through compliance. This was a conclusion also supported by the authors' more recent ECPR Study Group paper (Lynch-Wood and Williamson, 2010), which argued that most of the greening literature agreed in finding that regulation to be an important driver, especially where it is used flexibly. The concept of free-market values that Williamson et al. (2006) identify and upon which their conclusions are based is not clear. There is no framework used for identifying or mapping free-market values against any other values; no explanation of where the values originate from or how these ideas may relate at a personal level to the individual. A similar observation can be made from the 2003 study by Patton and Worthington: while the five managers who took part in the qualitative part of the study were shown to be seeking competitive advantage, access to new markets or better public relations, one manager was said to be driven by values; however there was no exploration of what values meant or how they were defined.

There is some suggestion that SME managers working within different business sectors may experience regulation differently. For example, using energy use behaviour as a proxy for engagement with climate change, Bradford and Fraser (2008) found that different categories of SMEs differed in their business behaviour, internal constraints and attitudes towards possible local authority policy options. Surveys conducted with owner-managers of 112 SMEs for Leeds City Council found that (as the largest users of energy in the study) manufacturing

SMEs were more likely to be monitoring their energy use than commercial or construction firms and were more likely to recognise opportunities for reducing energy use, and costs, voluntarily. However, the study also argued that most SMEs resisted engaging with environmental improvements without a 'significant driver' (ibid, p171) and that it was only in the absence of regulation that high energy costs could potentially engage business managers, although the perception of cost increases needed to be kept high. This study looked at manager attitudes but the literature focused on business greening rather than on understanding how the attitudes were formed or how they related to managers' values and beliefs. It was also unclear from the study whether managers only engaged with climate change on the basis of energy use or whether they might draw on a greater number of ideas and if so, how.

2.2.3 Regulation: summary and underlying assumptions

In summary, legislation has been identified in the literature as a motivation for SME managers to engage with business greening. Most studies either take a positivist approach or focus on exploring the influence of different factors in driving behaviour at the level of the organisation. The studies in this section show that in identifying legislation as a key driver, a number of authors have hinted at the values of the owner-manager or senior director as being key to understanding the complexity of SME motivation. None of the studies explore a deeper understanding of what those values are or what they really mean for managers' understanding of environmental issues. Although the work of Fineman focuses on larger businesses, he identifies fear as a motivation in compliance and demonstrates the importance of understanding motivation from the perspective of the individual manager.

2.3 Win-Win as a strategic motivation

2.3.1 The importance of win-win measures

Within the philosophy of ecological modernisation (section 1.3), the idea of the win-win approach is for SMEs to save money, increase business competitiveness and save the planet. As the 'business case' for greening (Revell, 2003, p5), it is enshrined in EU strategy as a key way to engage SMEs on a voluntary basis in order to meet the two goals of environmental protection and economic growth (e.g. Nilsson et al., 2009, p5; Revell, 2003, p5). The emphasis is on 'resource efficiency' and the policy approach is the mainstay of EU 2020 strategy (EU Communication, 2011) and UK government attempts to encourage SMEs to voluntarily reduce their impact on climate change (Revell et al., 2010, Revell and Blackman, 2007; Revell, 2003). For example, the UK government invested £240 million between 2005 and 2008 under the Business Resource Efficiency and Waste Programme (BREW) to encourage businesses to voluntarily improve their environmental performance through resource efficiency (NAU, 2010) and directed a proportion of Landfill Tax to encourage business in this way (£214 million 2008-10). The EU 2020 Strategy (EC Com, 2011) defines Resource Efficiency as: *"Producing more value using less material and consuming differently. It is an overarching idea that applies to all natural resources ... Making Europe more resource efficient is a route to achieving economic, social and environmental policy goals more easily, more securely, and at lower cost"* (ibid, p1). The idea is that resource efficiency will benefit both the bottom line of the company and the planet, by saving resources, increasing competitiveness and reducing carbon emissions – it's a win-win strategy. However, Scott et al. (2009, p13) and Revell and Blackburn (2007, p119) question whether any efficiency gains will be neutralised by a corresponding rise in consumption and argued that resource efficiency alone will not deliver a low carbon economy. However, similarly to section 2.2 above, the purpose here is to explain the nature and importance of

win-win rather than to critique the effectiveness of the approach per se. The relevance to this study is the need to understand win-win as a motivation for SME owner-managers engaging with business greening.

2.3.2 Critiques of win-win interventions

Vickers et al. (2009) see the transition to a low carbon economy driven by government intervention with win-win ideas as subject to ongoing doubt and a lack of responsiveness by SME managers (ibid, p60-1). In reviewing the green management and green innovation literature for the Department for Business Enterprise and Regulatory Reform (BERR), they conclude that win-win has been largely unsuccessful in engaging SMEs who have responded slowly to the idea of saving money through environmental improvements. Vickers et al. (2009), attributes this lack of responsiveness to a mix of internal and external barriers including a lack of supporting market, regulatory and fiscal signals. In this they question whether growing climate change concerns, energy price rises and greater policy or supply chain pressures may change this reluctance (by making the win-win case stronger), or whether the influence and power of existing practices and interests will act as constraints. They suggest that in order to understand why some SMEs do take up win-win opportunities while others do not there is a need to explore the learning dynamics and competing pressures that SMEs experience. In particular, they argue that there is a need to know more about how SME owner-managers understand and respond to government policies as well as how they understand and respond to climate change threats (ibid, p61); which actions are being taken; and what motivates different SMEs (ibid, p63).

A major Economic and Social Research Council (ESRC) funded study that explored the impact of win-win as a driver at the level of the organisation found that win-win approaches were insufficient for SME managers to be motivated to change their behaviour (Revell, 2007; Revel and Blackman, 2007; Revell and Blackman, 2004; Revell, 2003). The research studies

used a mainly qualitative approach to explore how 40 managers from the construction sector (separated between builders and architects) and restaurant sectors 'connected' with the win-win philosophy. In both sectors, the authors concluded that managerial decision-making was driven by short-term financial factors:

"Clearly even where the financial returns from eco-efficiency are supposedly obvious, such as waste minimisation and recycling, under resourced and busy owner-managers may not feel that such returns are significant enough to warrant the initial investment in time and resources required to pursue them. Because small firms are typically more concerned with short-term survival than the long-term environmental impacts of their businesses, eco-efficiency measures may thus be rejected if the payback is not perceived to be immediate" (Revell and Blackburn, 2007, p121).

Although the literature reports that SMEs respond to the win-win business case for greening with scepticism, (Lewis and Cassells, 2011; Spence, 2007; Simpson et al., 2004; Worthington and Patton, 2004; Vernon et al., 2003; Fineman, 2000) there is an apparent contradiction: SMEs do save money through resource efficiency. There are two points here; firstly, research suggests that while larger SMEs in particular have demonstrated financial savings through environmental improvements, they were found to engage at the level of making short-term savings that required little or no investment (Patton and Worthington, 2003). Even so, this may still be significant. In their final report to DEFRA, Oakdene Hollins (Hollins, 2007) showed that these low and no cost actions were still significant and could equate to £23 billion in business savings, with an environmental saving just in terms of carbon reduction equating to 29 million tonnes of carbon dioxide (MtCO₂) (ibid, p15). However, the report explored these savings in terms of industry sector rather than company size so it is unclear how much potential the authors envisaged for SMEs. Secondly, there is an emerging argument that while SMEs do save money through resource efficiency, it is not the financial

savings that motivate them. In other words, the financial savings are a by-product of environmental actions taken for other reasons (Boiral et al., 2011; Cassells and Lewis, 2011, p198; Spence, 2007, p541) but are used by policy makers to support the win-win message through the use of business case studies (Contantinos et al., 2010; Spence, 2007, p545). In addition, recent research argues that win-win oversimplifies motivations to engage with greening (Moran et al., 2013, p611; Williams and Schaefer, 2013). This means that research needs to engage with SME managers at the individual level to explore how managers make sense of greening in order to understand the complexity of motivation.

Williamson et al. (2006) suggest that the assumptions underlying win-win are questionable and the message is confusing. As introduced in section 2.2.2, the authors argued that free-market values and attitudes were found in the majority of the 31 manufacturing companies in their sample. Within the idea of free-market values, they found a distinction between the business case and business performance motivations. The 'business case' related to demonstrating good business practice to wider shareholders in society and they found no evidence that this influenced SME greening. 'Business performance' was argued to be related to cost reduction and efficiency improvements and this, they suggested, along with compliance, was the main motivation for SME greening. Similarly, Worthington and Patton (2004) found very little evidence that SMEs were motivated by competitiveness in terms of greening, while Spence (2007) argued that a basic problem with the win-win approach was the mistaken assumption that SME owner-managers were primarily motivated by the need to maximise profit and competitiveness. This suggests that grouping together saving money *with* increasing business competitiveness *with* saving the environment produces a message that causes conflict and confusion within how managers make sense of greening. However, understanding how managers see this from their perspective and at the individual level is a gap in current understanding.

2.3.3 Win-win: summary and underlying assumptions

In summary, while financial motivations along with legislation are identified as key to SME engagement with environmental issues, the literature does not present a clear picture. SME managers are reported to show scepticism about the win-win message while at the same time the actions they undertake are predominantly cost-saving. Emerging work sees win-win as an oversimplification of motivation and finds the assumptions upon which the framing is based as questionable. It is clear from this work that there is a need to explore business greening from the perspective of individual managers in order to see the richness and complexity of their understanding. With win-win still presented as the foundation for engaging SMEs with environmental improvements, the words of Fineman carry a useful closing warning:

“When greening is presented to business as a route to commercial success rather than a moral imperative, it has to stack up against other possible routes to profit and cost reduction – some of which are more plausible and rewarding” (Fineman, 2000, p199-200).

2.4 Individual motivation for business greening

2.4.1 Introduction

An emerging strand of research is developing that looks to examine managers and owners' motivation for business greening in greater depth (Williams and Schaefer, 2013; Moran et al., 2013; Cassells and Lewis, 2011). This emerging research highlights the complexity of managers' motivation and suggests that they may be motivated by more than compliance, saving money, improving competitive advantage or a need to save the planet. Indeed, most existing research into the motivation of managers for business greening suggests that the manager as an individual, with personal values, ethics and ideas, is important. What this means, however, is not always clear. For example, existing literature may use various

methodological perspectives to identify the importance of positive environmental attitudes but also finds that such positive attitudes do not necessarily translate into environmental action. Other studies refer to values and attitudes and suggest a gap between values and behaviour without clarifying what is meant by values. Implicit in many of these studies is the idea that when researchers refer to values they are referring to pro-environmental values. However from drawing on the values literature, it is clear that individual behaviour is motivated by a personal system of values rather than one value acting in isolation. This section will explore the distinctive features of SME owner-managers and how these support the need to understand business greening from the perspective of the individual manager. The section goes on to argue that implicit assumptions regarding values can be explicitly addressed using ideas from psychological research on values. Relevant ideas from the values literature are discussed and an emerging literature that applies these ideas to business greening, and individual behaviour in other contexts, is discussed.

2.4.2 Research gaps: the human factor

Increasingly, there are arguments calling for research on the motivation for business greening to be grounded in the experience of the manager (Battista and Perry, 2011; Onkila, 2009; Spence, 2007), not least because organisational theories ignore the role of the top owner-manager (Colwell and Joshi, 2013); ignore the power of language and human interaction (Onkila, 2009; Hunt, 2000); or apply inappropriate large company measures to SMEs (Battista and Perry, 2011; Spence, 2000). These are important gaps. As Beauregard (2010) explains as guest editor in a special issue of the *British Journal of Management* (21:2), the emotional 'human factor' is often dismissed (by managers and researchers) but is the foundation for both personal and organisational performance. Engaging SMEs with behaviour that helps society mitigate and adapt to climate change will at least partly depend upon knowing more about how managers engage at an individual level. This is a view supported by Onkila (2009), who argues that research on values is a 'pre-requisite for a deeper

understanding' (ibid, p287) of how businesses interact with environmental issues, particularly while the current dominance of research approaches leave a significant gap in understanding.

While previous research into SME greening has acknowledged the importance of the owner-manager's values and attitudes, this earlier research (e.g. Hsu and Cheng, 2012; Cambrio-Fiero et al., 2007) has failed to explore in any depth what values, emotions and attitudes are important or how and why they affect greening behaviour. Williams and Schaefer (2013) highlighted the importance of this gap, finding that each of the environmentally proactive managers in their study were driven by a need for a fit between personal and business values. The managers' understanding of climate change, as an extension of their existing social and environmental concerns, meant they described a personal responsibility and urgency to act on reducing the environmental impact of their business. In order to do this, these managers ensured that the 'environment' was included as a stakeholder in every decision and the least environmentally harmful course of action was taken wherever possible. However a major limitation of this research was the focus on a small number of environmentally proactive managers. This may suggest that managers were making sense of climate change in similar ways because they were drawing on similar values. By not including managers who were more 'reactive' or 'resistant' (Tilley, 1999b), it was not possible to explore how these issues were considered in SMEs more broadly. Apart from suggesting that managers were motivated by needs other than simply wanting to protect the environment, the study did not explore in any depth the values upon which the managers were drawing. This is important because, as will be discussed in section 2.4.4, values play an important role in understanding by both filtering the information that individuals 'hear' and acting as motivation for behaviour (Bansal and Roth, 2000; Rokeach, 1968).

2.4.3 SME owner-managers: distinctive features

A second reason to focus on the experience of the individual SME owner-manager relates to their key role within the business. Unlike managers and leaders of large firms, founders of small businesses often build companies that are in line with their personal aspirations and philosophies. They often have greater strategic and operational discretion over their business, and it is usually within their power to disseminate their own vision to permeate organisational values and culture (Hammann et al., 2009; Heugens et al., 2008; Schein, 2004; Dawson et al., 2002). Thus, personal ethics and business ethics may be more closely aligned in SMEs than in larger firms (Werner, 2008; Jenkins, 2004; Spence, 1999). The owner-manager is widely recognised within SME literature as the dominant focus of the business with the company developing to reflect their individual persona (Hsu and Cheng, 2012; Lloyd-Reason and Mughan, 2002; Baden et al., 2009; Gray, 2002; Hammann et al., 2009). It is questioned how the personality of managers may be affected by the influence of their employees, spouse, children, local communities and mentors and the effects these might have on their social concerns and concern with integrity and responsibility (Visser, 2012; Spence, 2007; Spence and Lozano, 2000).

However, while it is possible to make the theoretical argument that managers' values are important and much of the greening literature identifies the owner-manager as key to understanding greening behaviour (e.g. Battisti and Perry, 2011; Revell, 2007; Cambrio-Fiero et al., 2007; Friedman et al., 2000; Petts, 2000; Cordano and Frieze, 2000; Purvis, 2000; Petts et al., 1998), it is not clear what these values and attitudes are; how they develop or how they are enacted through greening behaviour. This leaves a gap in understanding regarding the role of the individual manager (Hofmann et al., 2012). For example, in their seminal work, Petts et al. (1997) found that proactive managers are likely to have a positive attitude towards the environment but, directly building on this approach, it is more recently found that a positive environmental attitude does not always translate to proactive behaviour

(Lewis and Cassells, 2011; Revell et al, 2010; Gadenne et al., 2009; Fieldhouse, 2006). Revell et al. (2010), refers to this as a 'value-action-gap' but later research by Battisti and Perry (2011) found no evidence for this, arguing that managers' actions were consistent with their understanding of environmental responsibility (see section 2.4.4 regarding the relationship between values and attitudes). A positive environmental attitude has also been related to altruism (Vernon et al., 2003) and may conflict with market-based profit orientations (Puohimäki, 2003 in Finnish, cited in Onkila, 2009), which may not be the sole driver of environmental behaviour (Hemingway and MacLagan, 2004). For example, with the focus on understanding the factors influencing motivation, internal motivation has been seen as an environmental orientation mixed with potential market advantage (D'Angelico and Pujari, 2010) although this still leaves open the question of where the internal motivation comes from and how different motivations exist together.

2.4.4 Understanding values: research in the Rokeach tradition

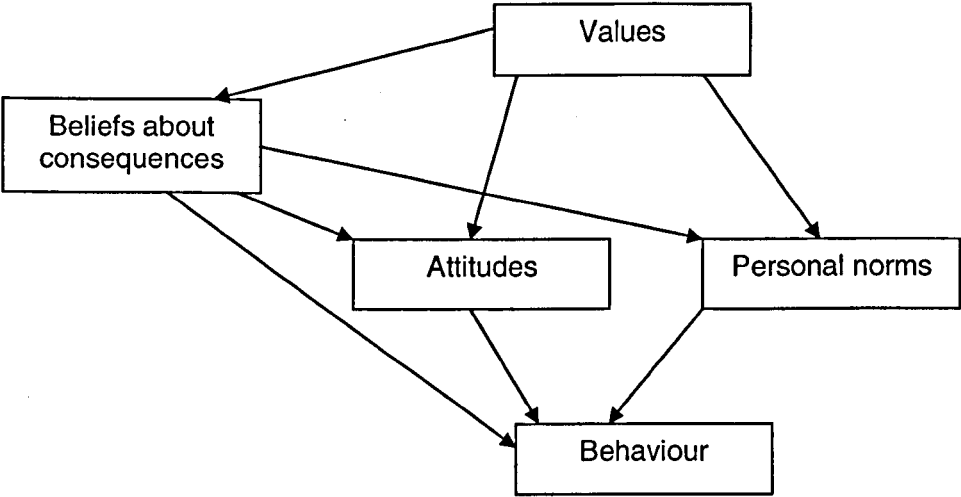
The green business literature makes reference to the values of SME managers as important yet can be unclear about what is meant by 'values', often referring to an environmental orientation or positive environmental attitudes (see section 2.2.2 above). However, there is a large amount of values literature that could be used by researchers interested in how and why SME managers engage with greening. This section will look firstly at what is meant by values, beliefs and attitudes in order to clarify these expressions and how they will be understood in this research. Secondly, this section will review the role of values in understanding environmental issues from other research fields, such as environmental education. There is a vast body of research on values that examines their role in the behaviour of individuals, organisations and broader social groups. This section will focus on individuals' values and a growing appreciation of the insight they bring to an understanding of engagement with greening and climate change. The research used in this way comes from the tradition of Milton Rokeach, who is commonly referred to as the '*father of modern values*

research' (Ralston et al., 2011, p4) because of the significance of his contribution to the field of values research. In his seminal work, *Beliefs, Attitudes and Values* (1968), Rokeach explains how research in this area had focused on attitudes largely because they were easiest to measure. He explains how individuals can hold many hundreds of attitudes, but that there is a much smaller number of values that underlay them and filter the information individuals see and hear and act upon. Values are the deeper needs that motivate behaviour and are therefore more clearly linked with personal goals and behaviour. In other words, values underlay attitudes and are more central to the individual. He goes on to reflect on the nature of attitudes and considers their relationship to beliefs and values:

"Once a value is internalised it becomes, consciously or unconsciously, a standard or criterion for guiding action, for developing and maintaining attitudes towards relevant objects and situations, for justifying one's own and others' actions and attitudes, for morally judging self and others, and for comparing self with others. Finally, a value is a standard employed to influence the values, attitudes and actions of at least some others" (1968, p160).

In the diagram that follows, the relationship between values, beliefs, attitudes and norms is illustrated by drawing on the work of Thogersen and Grunert-Beckmann (1997). The work of Thogersen and Grunert-Beckmann (1997) confirmed the core role of values as underpinning and influencing attitudes, beliefs and behaviour.

Figure 2.1: Illustrating hierarchy between values, behaviour, attitudes, beliefs and norms (after Thøgersen and Grunert-Beckmann, 1997).



Values drive behaviour and ideals yet are also abstract and not tied to any one specific behaviour, object or situation (Rokeach, 1968, p124). Rokeach suggested that values are expressed through belief statements about the world which could not be ‘directly observed’ but could be inferred from what was said and done (ibid, p2). For example, two individuals might express similar attitudes towards an idea but be drawing on entirely different central values. Once a value becomes central to an individual, it is difficult for that to be challenged and becomes a guide to action and a standard that is used to justify and influence one’s own and others’ behaviour. Rokeach argued that values are organised within an individual as a personal system or hierarchy where some values are personally more important than others. This can mean that values are in tension with each other and when a situation activates two or more values, the individual will use their learnt prioritisation of values to make choices and resolve conflict (ibid, p161). Rokeach argued that a number of values influences any given behaviour.

It is useful to lay out how the ideas of Rokeach may relate to business greening or environmental issues, such as climate change, for this current study. The work of Rokeach

suggests that how an individual sees such issues would be a reflection of what they believe it to be, which would reflect its importance with regard to what and who is valued. For example, if one believes the world to be a dangerous, insecure place, it is possible to see climate change as threatening the end of the world because the world can end. If however, one believes that mankind is clever and can adapt to anything and will survive because mankind always has, accepting climate change as a threat would mean letting go of these other beliefs. As Rokeach explained, the greater the consequences, the greater the effort is made to resist change to centrally held beliefs (ibid, p23). He argued that the majority of the values literature focused on peripheral beliefs and attitudes rather than central beliefs and values and are, *“usually studied in isolation and chosen out of convenience and ease of manipulation rather than representativeness or importance”* (ibid, p60). From what is seen of the way in which values are used in the business greening literature, this accusation is still relevant even though theoretical understanding of values has moved forward in other areas of study.

The work of Rokeach has been developed by a number of researchers, including Shalom Schwartz. In particular, the Schwartz Value System (SVS) has been tested in 50 countries and found to be robust and consistently relevant to human values (Ralston et al., 2011). Section 2.4.6 discusses how the SVS has been used by two recent studies to explore environmental motivation. A fuller discussion, along with an illustration of the SVS and how it is used in this study, can be found in section 3.3.4.

2.4.5 The role of values in understanding environmental issues

Within the environmental and values literatures, there are a number of studies that look to identify which, or how far, values influence environmental behaviour (e.g. Henry and Dietz, 2012; Corraliza and Berenguer, 2000; Stern et al., 1995; Neuman, 1986). These studies

typically adopt a positivist methodology in order to report on the causal influences of particular values (which are treated as independent variables) on particular environmental actions, such as recycling (Corraliza and Berenuer, 2000) or energy efficiency (Miroso et al., 2013; Poortinga et al., 2004; Neuman, 1986) as well as pro-environmental behaviour more generally (e.g. Stern and Dietz, 1994; Dunlap et al., 1983). There are also research strands that look at the role of specific values and at a more general distinction between self interest, altruism towards other humans and altruism towards other species and the biophysical environment. This latter work builds on the altruism studies of Schwartz and Bilsky (1987, 1990) which in turn is built on the values theory of Rokeach (Henry and Dietz, 2012, p241).

Within these earlier studies, there seems to be agreement that environmental behaviours are linked with values, but attempts to develop generalised models of how behaviour links with particular values have generated limited insights into the ways that individuals think about environmental issues. For example, Neuman (1986) found that there was a positive correlation related to environmental behaviour and beliefs but that pro-environmental values do not predict pro-environmental behaviour. Building on earlier work, Neuman et al., (2000) surveyed 125 undergraduates to investigate the predictive power of values and beliefs and their interactions with external variables. They concluded that environmental behaviour depends on values as well as situational variables in an interconnected way. They also found that when there was conflict between personal values and the situation, the predictive power of values was stronger if there was consistency between the values and the context. There are numerous studies that look at this inconsistency from the perspective of a values action gap between espoused environmental values and pro-environmental behaviour (e.g. Blake, 1999; Barr, 2006; Kollmuss and Agyeman, 2002; Flynn et al., 2009). The values action gap is also discussed in section 2.4.3. However, Kennedy et al. (2009) suggest that rather than seeing failure to produce a model that uses values, beliefs and attitudes to predict environmental behaviour as a reason to give up, researchers should look from the

perspective of the individual and be attentive to complexity. They argue that businesses are made up of individual people and that it is clear that even under similar constraints and conditions, individuals behave differently. A greater appreciation of how individuals trade off between competing priorities and frame environmental concepts is recommended for future research (Kennedy et al., 2009, p159).

The enactment of behaviour as an expression of personal values is described by Parker et al. (2010) as '*integrated regulation*' where this helps to bring about a long term vision of the self. They also describe a second form of external motivation as '*identified regulation*' where motivation comes from accepting externally identified goals as important for the benefit of others and accepting personal responsibility for and ownership of the actions required. Although not suggested by Parker et al. (2010), of these two motivations, the first would appear to be about enhancing the self and the second about enhancing wider society. This relates to the value system of Shalom Schwartz, discussed in sections 2.4.6 and 3.3.4, where self-enhancing and self-transcending values are identified and understood to be in constant tension with each other.

2.4.6 The Schwartz Value System and its application in environmental studies

The Schwartz Value System (SVS), which was introduced in 2.4.4, builds on the tradition of Rokeach and has been applied in two recent studies in order to gain a better understanding of individual values and environmental behaviour. Miroso et al. (2013) explores how values link with one particular environmental behaviour: energy use in the home. The authors take a qualitative approach and use laddering techniques to use the SVS as a framework for identifying and mapping the values of householders (ibid, p7). In contrast to earlier research on values, which looked to explain which values cause which behaviour (Section 2.4.5), the authors started with examples of energy use behaviour and talked to the individuals concerned in order to explore the underlying values. They found that individuals in the study

drew on a number of values for the same behaviour. Furthermore, they found that individuals can draw on the same value but express different behaviour through different reasoning. In addition, some values were seen to be more 'helpful' than others in encouraging energy use behaviour. For example, individuals might draw on security values (e.g. being concerned about germs) to justify taking longer showers or using a higher washing machine temperature. Conversely, individuals may take pleasure (Hedonism) in hanging out washing to be air dried and so coincidentally reduce energy use. The authors did not discuss all of Schwartz's values: in particular, they made no reference to Power, Benevolence or Self Direction in their findings, implying that they found no evidence for the individuals in their study drawing on these values to motivate their energy use behaviour. The values that the authors found individuals did draw on (ibid, p7) are shown in table 2.1 below.

Table 2.1: Values drawn on by individuals to describe energy efficient behaviours (after Miroso et al., 2013)

Achievement	Capable Intelligent
Universalism	Protecting the Environment Social Justice Unity with Nature Equality World of Beauty
Hedonism	Pleasure Enjoying Life
Tradition/Security	Respect for Tradition Cleanliness Social Order

A recent paper by Howell (2013) seems to implicitly build on the altruism studies of Schwartz and Bilsky (1987, 1990) to consider the values that 16 individuals associated with local Carbon Rationing Action Groups (CRAG)³ drew on to understand their adoption of lower carbon lifestyles. The CRAG movement was based on the principles of 'contraction and convergence' (Meyer, 2004) whereby radical cuts in carbon use within developed economies converge with growing carbon use in developing economies. Howell (2013), who had also researched the CRAG movement in 2008 to input into policy considerations supporting personal carbon allowances, found that members drew on altruistic values towards humans rather than environmental values per se (or in Schwartz's terms, Self Transcendence: Universalism; Protection of the environment; see Appendix 3 for SVS tables). In discussing egotistical values (Schwartz; Self-Enhancing values), Howell makes no distinction between Schwartz' individual level values of Power and Achievement. In particular, she argues that individuals in her sample were mainly motivated by social justice values and were passionate about the injustice of climate change whereby the poorest in developing countries are those hit first and hardest by something they did not cause and are least able to respond to. She also found dissatisfaction with the term 'climate change', with suggestions that it was too 'mainstream' to engage people with action. She concluded that appeals to engage the public more widely with carbon reduction could be better framed in terms of social justice rather than simple to do lists of easy actions that were aimed at reducing environmental harm. However, founded on the principle of contraction and convergence (Mayer, 2004), it seems

³Carbon Rationing Action Groups (CRAGs) were a grassroots movement in the UK and elsewhere, which encouraged small groups of individuals to work together to increase awareness of the need and opportunity to make radical cuts in carbon use. CRAGs are believed to have ended because they did not attract sufficiently large numbers of new members, while existing members became inactive once they felt they had done as much as they could. Many are thought to have moved their support to the Transition Town movement while others have become involved in a similar movement called Carbon Conversations (Heischer, 2013).

understandable that CRAG members might be motivated by a need for carbon equality with people in developing countries, especially with the author's observation that several came to CRAG via human rights action groups.

2.4.7 Section summary

In summary, section 2.4 has provided a critique of literature that focuses on the individual as the unit of analysis. This critique has included the key role of SME owner managers within the business and evidence suggesting that personal and professional ethics may be closely related. Research that looks at individual motivations within the SME environmental literature has highlighted somewhat confusing and contradictory ideas regarding the role of attitudes and behaviour. Understanding how values underlay attitudes, behaviour and norms suggests a useful approach towards a more in-depth understanding of individual motivation. With limited values research in the field of business greening, this section has looked at the role of values in other areas of environmental research as well. Two qualitative studies (Miroso et al., 2013; Howell, 2013) were shown to highlight how individuals draw on more than one value in describing particular environmental behaviour. In addition, it was shown how individuals could be motivated towards pro-environmental behaviour for social as well as self-interested reasons without any motivation towards protecting the environment.

2.5 Individual perspectives on climate change

2.5.1 Introduction

As introduced in section 1.3, climate change is an issue that affects SME managers. As an idea, climate change is presented to business within an ecological modernisation framing whereby carbon reduction and resource efficiency save money, improve competitiveness and save the planet – it is a win-win message. Ecological modernisation helps to bring the two ideas of climate change and business greening together as both are framed within the same

policy approach. It is therefore important to understand how SME managers make sense of climate change in order to understand how it is part of their sensemaking of business greening and how the two ideas motivate their response within the transition to a low carbon economy. This section does three things. Firstly it positions climate change as a socially constructed idea where individuals understand the issues as being about more than just the science; where climate change is presented as a contested social, economic and political idea in which non-scientific, lay individuals have multiple, dynamic meanings. Research on how the media construct climate change is useful in considering popular thinking. Secondly, this section will explore what is already known about how lay individuals make sense of climate change and in particular the role of values, attitudes and beliefs. Finally, this section will look explicitly at what the business literature says about how individuals understand climate change within organisations, particularly SMEs.

2.5.2 Climate change: from science to social construction

The broad scientific consensus argues that climate change is caused by global warming (Hansen et al., 2000; Hansen, 1998; Vitousek, 1994). The greenhouse gases that act as a blanket around the Earth mean that the average temperature of our planet is 14 degrees centigrade (NASA, 2013). However, human production of carbon dioxide and other greenhouse gases, such as water vapour and methane, have already pushed the average temperature to nearer 15 degrees with carbon dioxide levels in the atmosphere already higher than at any other time since life has existed on Earth (CDIAC, 2013). The use of carbon, particularly over the last 50 years, is expected to increase the average temperature by a further two to four degrees by the end of this century and warming is likely to continue for centuries even if greenhouse gas levels are stabilised (IPCC, 2007). The positive feedback systems caused by global warming are associated with current and future predicted changes in climate (AMS, 2012). For example, as the reflective ability (albedo) of ice is reduced by melting, more heat is absorbed by the surrounding ocean, the air warms and this

accelerates further ice melt. However, the large number of studies that show how the science is received with scepticism by lay publics (e.g. Poortinga et al., 2011; Whitmarsh, 2011; Dunlap and McCright, 2008; Lorenzoni et al., 2007) serve to illustrate that climate change is not just a question of **if** an individual believes in climate change but **how** individuals believe in climate change and **what** individuals believe climate change to be (Vainio and Paloniemi, 2013).

Mike Hulme (2009) has been credited with positioning climate change as a socially constructed as well as a physical phenomenon (Hoffman, 2011; Szerszynski and Urry, 2010; Spence and Pidgeon, 2010). In this, it is worth emphasising that the position of both Hulme (2009) and this current study is that any notion of climate change as socially constructed and contested is in *addition* to accepting climate change as a physical phenomenon; although this 'knowledge' is in itself not value-free. It might not be surprising that lay publics could be confused by scientific ideas or may not appreciate why a few degrees of global warming over 50 years should concern them now. However, seeing climate change as socially contested is more than this and recognises that individuals filter what they understand from what they hear through their values, and construct an understanding that both protects their sense of self and fits with what motivates them to act. This means that understanding how individuals make sense of climate change is about more than giving information to fill gaps in knowledge and recognises that individuals frame that information differently depending on where, when and who they are (Wolf and Moser, 2011; Antal and Hukkinen, 2010; Dirlx and Gelders, 2010).

In presenting climate change as a socially constructed abstract idea '*endowed with (multiple) meaning and value through cultural practice*' (Hulme, 2009, p14), Professor Hulme (ibid) argues that debates about climate change at all levels in western society have shifted from the physical to the social to take on new meanings and to serve new purposes. His book (Hulme, 2009) examines climate change from a number of different viewpoints to understand

disagreement. He says: *"If we are to use climate change constructively in our politics, we must first hear and understand these discordant voices, these multifarious human beliefs, values, attitudes, aspirations and behaviours. And especially, we must understand what climate change signifies for these important dimensions of human living and human character"* (ibid, xxvi preface). Hulme identifies four climate change discourses to illustrate how climate change 'has been constructed ... with plasticity' as a dynamic construction:

- Climate change as a scientific controversy where climate change is seen as a battleground between different approaches within science and between different worldviews. In this way, climate change can become a proxy for existing conflicts between different potential versions of the future and between competing centres of (social) authority.
- Climate Change as a justification for the commodification of the atmosphere (especially carbon dioxide) and is seen as the current political rationale for transferring a public commons into a privatised asset.
- Climate Change as the inspiration for a global network of new, or reinvigorated, social movements where climate change represents all that is bad about capitalism and globalisation.
- Climate Change as a threat to ethnic, national and global security where reporting in terms of the 'greatest problem facing humanity' undermines both what science is revealing and the many other ways of knowing about Climate Change that are needed for 'personal and collective decision making' (Hulme, 2009, xxxiii).

In further work, Hulme (2011) refines these four discourses into six ways of framing climate change where each frame is linked with a particular solution. While acknowledging that there are as many frames as there are ways of seeing the world, these include; seeing contraction and convergence as a solution for those who see climate change as an issue of global

injustice, or carbon trading as a solution to climate change as market failure. Hulme argues that each approach attracts different audiences and are used by supporters to elicit different responses yet, with the exception of those who believe climate change is natural, each construction would be broadly consistent with the views of the Intergovernmental Panel on Climate Change (IPCC, 2007). In other words, instead of accepting that climate change is multifaceted, as humans we insist on arguing that our particularly favoured side is the right one! Hulme argues for greater awareness of beliefs and ideologies because *'climate change is not simply a fact waiting to be discovered...or a problem waiting for a solution... (it) is an unfolding story of an idea and how this idea is changing the way we think, feel and act'* (ibid, xxviii). This awareness needs to address presumptions in favour of continued economic growth (ibid, p139) and how the environment, duties towards human and non-human others and the welfare of future generations are valued (ibid, p143-5). Hulme argues that disagreement also comes from how individuals evaluate the risks of climate change differently (ibid, p181). In this, he sees that the media, interest groups and political voices all influence the perception of risk and which risks are acted on.

The media is also clearly implicated in constructing social environmental concerns (Kalof, 2011) with social constructs mirroring images used by the press (Smith and Joffe, 2012). Media reporting of climate change is found to be partisan (Kyun Soo Kim, 2010) with the British press, in particular, being dismissive, unsympathetic and unrepresentative of climate science (Woods et al., 2010). Reporting varies to reflect different regions and contexts (Grundmann et al., 2012; Jones, 2009). For example, the Swedish media is found to anchor reporting on climate change in the emotional contexts of fear, guilt, nostalgia and hope while in the UK, nuclear power is framed as an unpopular solution to climate change (Pampel, 2011); where climate change is framed as an energy problem (Bickerstaff et al., 2008) or a conspiracy (Adam, 2010). Largely, the media is found to reflect the view that climate change is happening but that it is not necessarily anthropocentric in cause (Unger, 2000) and not

personally relevant (Porenzoni, 2006). These are views found to be reflected by UK society (YouGov, 2009).

2.5.3 Understanding how lay audiences make sense of climate change

There are a growing number of studies that look to explore how individuals engage with climate change. Engagement is defined as going beyond awareness to caring and being motivated to action (Lorenzoni et al., 2007, p446). Different approaches have identified a number of factors that influence understanding, such as attachment to a local place that is at risk, or receiving a local message (Scannell and Gifford, 2013; O'Neil et al., 2009) and gender (Xioa, 2013; Scannell and Gifford, 2013; Vainio and Paloniemi, 2013; Searle and Gow, 2010; Semenza et al., 2008). This implies that the way in which climate change is framed as an issue is important. For example, findings that women are more engaged with environmental issues, including climate change, than men (Xioa, 2013; Scannell and Gifford, 2013) may suggest a difference in values. Although not writing specifically about environmental behaviour, Carol Gilligan (1988) discusses the female voice as an 'ethic of care' and traces this to the formative relationship between parent and child (ibid, 1988, p5). Some research finds that individuals are not interested in climate change and see it as a distant concern with gradual consequences (Wibeck, 2012). Most studies however find that, to a greater or lesser extent, individuals are aware of climate change and are concerned about the implications but fail to engage with changes to behaviour. This dissonance reflects climate change as a socially constructed and contested idea and will be explored in this section.

Vainio and Paloniemi (2013) asked whether belief in climate change matters. In exploring this question using Eurobarometer data from the entire adult Finnish population, the authors concluded that what individuals believe climate change to mean matters the most. While belief in climate change and knowledge about climate change were found to be positively correlated, most importantly, individuals needed to believe that climate change was caused

by human actions in order to engage in behaviour to reduce its potential effects. In this, both younger people and women in general were found to have stronger belief that climate change was accelerating than men. The authors also found that trust in political systems to resolve such global problems reduced belief in the need for individuals to act.

Other studies have found that (at least American) conservative male voters are the most reluctant to accept a human role in the cause of climate change or the need for individual action (Mooney, 2011; Zia and Todd, 2010; Hamilton, 2010). This raises issues of trust in current political and social institutions to 'solve' climate change. While political institutions tend to be middle-aged, middle class and male dominated (Ashe et al., 2010) they do, at least outwardly, in the UK and Europe, support scientific consensus on climate action through support for the Kyoto Protocol (1997) (Hulme and Turnpenny, 2004). However, younger, female or more liberal voters are most likely to express a lack of trust in existing structures to address climate change and feel excluded from decision making by experiencing greater barriers to engagement than men (Scannell and Gifford, 2013). Ironically those voters most like those in power are found to be the most protective of business-as-usual; the most defensive of change and the most sceptical of the human role in climate change. This means that it matters what individuals believe climate change to be, and that trust and gender are implicated as part of that understanding.

Scannell and Gifford, (2013) argue that, in addition to gender; two other factors are most significant in influencing engagement with climate change. They identify these as 'place attachment' and 'receiving the local message'. These two concepts have also been identified by a number of other studies (e.g. Adger et al., 2011; Fresque-Baxter and Armitage, 2012; Devine-Wright, 2011; Hess et al., 2008) and imply that climate change becomes more important to individuals when it can be seen to affect what is most valued. In this way, observations of changing weather are also seen to figure in how individuals make sense of

climate change. Changes in weather can be both personally experienced and locally and globally observed. For example, March 2013 was reported as the coldest March in Britain for 50 years and this was directly related to climate change in the UK media (e.g. Vidal, 2013a) and to a slowing of the British economy (BBC News, 2013). In a study that invited 56 individuals from London to express their 'first thoughts and free associations' on what climate change meant to them, weather was found to be the second most important idea (Smith and Joffe, 2012). In this, twenty per cent of respondents first associated climate change with changes in the weather, extreme weather, blurring of the seasons, strange, unnatural and unpredictable weather. The association with weather is despite insistence from the UK Environment Agency that individual extreme weather examples cannot be specifically linked to climate change (Ward, 2012). The issue that was shown to be most salient by Smith and Joffe (2012) was melting ice which, as a second association, was linked with flooding (an example of an extreme weather event, see Crichton, 2009). 93% of first associations and 76% of second associations were classified by Smith and Joffe (2012) as either describing potential causes or impacts of climate change. Three themes were identified: the self/other theme, which included feelings of guilt at an individual's own role in causing climate change; concern for others affected by climate change; and blame towards industrialising nations and helplessness about what any one individual could do. The second theme related to whether climate change was natural or unnatural and included fear about the unnaturalness of changing weather; anxiety about the future; fear for the next generation and nostalgic recollections of how the weather used to be. The question of certainty versus uncertainty was the final theme, with participants trying to unravel which aspects of global warming and climate change were natural and which were unnatural. Feelings included disempowerment and confusion as a result of contradictory press reporting. The study by Smith and Joffe (2012) emphasised the importance of both local frames of reference and emotion in exploring how individuals make sense of climate change.

The final area of research used here to highlight the social construction of climate change is the role of self-identity. In addition to issues discussed under gender, above, several authors have found that a need to protect self-identity is associated with the avoidance of engagement with climate change (Corner, 2012; Fritzsche and Hafner, 2011; Mooney, 2011; Ryghaung et al., 2011; Hobson and Niemeyer, 2011; Kahan et al., 2010; Crompton, 2010; Marshall, 2010; Whitmarsh, 2009; Hamilton and Kasser, 2009; Stoll-Kleeman et al., 2001). This implicates values and in particular self-enhancing values that prioritise personal gain over concern for others.

Crompton (2011, 2010) argues that a self-identity that is motivated by wealth, possessions, achievement and status is strongly associated with negative attitudes and behaviour towards others and the environment. In a similar way, thinking about the self in terms of social identity, he argues (2010), creates in-groups and out-groups where people 'not like myself' lack consideration. Crompton (2011) also argues that a natural human response to fear is to reduce threats to the self by using 'emotional management strategies' that reduce guilt and anxiety. Such strategies may include dismissing the problem, denying complicity and seeking pleasurable diversions. Marshall (2010) describes this as an 'ethical behavioural offset' whereby individuals protect their identity by doing just enough to reduce feelings of guilt and compartmentalising singular activities, such as recycling, in order to carry on business as usual. Climate change may also threaten self-identity by undermining individual ideas about the future and personal aspirations for self and children thereby encouraging defensiveness (Hamilton and Kasser, 2009), which may encourage scepticism (Hobson and Niemeyer, 2011) and raise doubts about the benefits of personal action (Stoll-Kleeman et al., 2001). Perversely, seeing climate change as a dangerous threat may encourage pleasure seeking, hedonistic activities especially those associated with high personal risk, as individuals seek to feel alive in the face of mortality (Homburg et al., 2007). This means that climate scepticism is less about disputing the science and more about protecting self-identity (Hobson and

Niemeyer, 2011), with climate science dismissed as inaccessible and of little personal relevance ('I'm not a scientist', Bickerstaff et al., 2008, p156).

2.5.4 How SME owners and managers make sense of climate change

Generally there is less research on how SME managers understand climate change than there is for lay audiences more widely. Research into how climate change is seen in organisations is viewed as a relatively new area of study, where there is an instrumental focus on win-win and the need for technical and managerial solutions (Wittenben et al., 2012). Research focusing on SME managers is even scarcer, and often portrays climate change as an abstract concept of little relevance (Crichton, 2009; Purvis et al., 2000). From a social constructionist perspective, the question is less one of whether SME managers understand climate change 'correctly', in line with scientific expertise, or respond 'appropriately' to it, but what their own understanding of climate change is, how it is developed and what actions it might lead to. Hoffman (2010) argues that climate change needs to be seen as a behavioural and cultural issue that engages with the values of individuals within the organisation.

In order to develop policies to address climate change it is important to gain an in-depth understanding of how these important actors understand the phenomenon and what it means to them. Policies based on an outside, 'expert' view or how business 'should' respond often fail to take seriously the manager's understanding as a lay person and instead prescribe an approach that re-frames the win-win, save money save the planet approach to climate policy. While win-win has been found to save businesses money, it has been found not to motivate managers to act on climate change (Boiral et al., 2011). Although the average company size in their Canadian survey of manufacturing firms (ibid) was 342 and too large to be considered SMEs, the authors' findings are of interest because they concluded that the motivation to engage with climate change did not come from potential cost savings, but from the

environmental and social concerns of managers along with pressure from stakeholders. Action to mitigate climate change was a potential source of business costs but reducing greenhouse gases for non-financial reasons could have cost benefits as a side effect.

In recognition of the risks to SMEs from climate change, and the financial implications for the insurance industry, AXA insurance commissioned the first research to look specifically at how SMEs understood climate change. The 2006 survey reported by Crichton (2009) focused on 400 businesses. Of those, 100 had been directly affected by flooding and 300 were not. All businesses had less than 50 employees, although predominantly companies had fewer than ten. Crichton (ibid) found that, while 85% of managers were aware of climate change, 74% did not see climate change as any real threat to their business and 46% believed climate change was blown out of all proportion (ibid, p5). The author expressed concern (ibid, p5) that a lack of awareness of the threats from climate change, even by those who had experience of flooding was worrying and was likely to be even lower in areas that had yet to experience flooding directly. This increased the risk that SMEs would fail to survive extreme weather events associated with climate change. However, the evidence is slightly contrary here because research based on national survey data (Spence et al., 2011) found that individuals were more likely to engage in energy efficiency actions to address climate change once they had personal experience of flooding. The survey by Spence et al. (2011) was not focused on individuals in business but was carried out four years after the first AXA study that Crichton (2009) draws on and these differences may account for the variation in response.

Research funded by an Australian Research Council Discovery Grant has produced two papers of particular interest. Although the research was based within large companies, it builds on the approach of Fineman (2010) to explore understanding at an individual level. Wright et al. (2012) and Wright and Nyberg (2012) take a qualitative approach to look at how 36 sustainability managers reflect on climate change. While business managers presented

climate change as a strategic opportunity, Wright and Nyberg (2012) found that such 'rational discourse', which included the language of win-win, limited the ability of individuals to relate to climate change (ibid, p1583). Their findings emphasise how the different ways in which managers framed climate change were highly emotional and personal. For example, managers expressed anxiety and apprehension while describing climate change as a threat; frustration, anger and hostility in describing climate change as a conflict; and hope, enthusiasm and excitement in describing climate change as a change and opportunity. Wright et al. (2012) focus on the self-identities portrayed by the 36 sustainability managers with regards to climate change. A common genre was identified as Achievement (ibid, p467) whereby managers were using climate change to draw on what mattered to them personally to demonstrate professional skills and knowledge. Managers were found to negotiate between different self-identities depending on the demands of the role and different contexts, but these were not 'infinitely malleable' (ibid, p466).

2.5.6 Section summary

This section has recognised climate change as a socially constructed issue of personal and professional relevance to SME managers. Research that focuses on the experience in the SME context is limited, yet there are implications for businesses that fail to acknowledge and address the risks. The media is implicated in creating confusion through partisan and dismissive reporting that, significantly, downplays the role of human action in causing change. Research that explores how lay audiences make sense of climate change implicates values implicitly by emphasising the importance of gender, self-identity and local attachment to places at risk, as well as the emotions used to express ideas.

2.6 Concluding discussion

This critical review of the literature has indicated a number of challenging methodological issues that need to be addressed when conducting research in this area. Section 2.2 argued that there is a need to use methodologies that explore in greater depth the complexity of individual behaviour and make explicit value assumptions. In particular, some studies (e.g. Bradford and Fraser, 2008; Patton and Worthington, 2003) allude to the role of values but do not explore what this means or how this relates to the attitudes they find. Section 2.3 argued that how SME managers appear to engage with the win-win business case is more complex than finding that SME managers tend to treat the message with scepticism. SMEs do save money through resource efficiency but it is unclear how financial benefits are understood by SME managers or how they see this as motivating their own actions. More recent research suggests that the message is both oversimplified and confusing and highlights a gap in understanding the managers' perspective on this key policy area. Section 2.4 argued that the 'human factor' (Beauregard, 2010) is an important gap with regard to research on SME greening. Although research has widely acknowledged the SME manager to have a crucial role in both the business and the individual approach to greening, the current dominance of positivist approaches and/or company level studies, leaves a large gap in understanding. Drawing on values in the tradition of Rokeach is shown to be a useful way of understanding values and to be the foundation of modern values thinking. These studies typically used positivist approaches but are recently seen to be emerging as a tool for exploring individual understanding, especially in the context of climate change. Section 2.5 argues that climate change is a socially constructed idea whereby understanding needs to reflect individual values and the way in which ideas are framed. Research that considers how individuals within business organisations engage with climate change is viewed as a relatively new area.

Given the research aims of this study, the literature review has focused on the individual level of analysis. It is clear that there is a significant gap in understanding how SME managers are

motivated to engage with business greening in the context of climate change. There is a clear opportunity to explore how managers draw on their personal values to help them frame these issues and to understand how the different ideas are understood and acted on. The research also points towards broader questions. For example, what is the appropriate scope of the data collection and analysis; when is it necessary to extend a study beyond the individual manager to include the managerial team, the workplace, the company, and inter-firm networks; and how are connections made from the individual to the firm to beyond the firm.

Chapter 3: Methodology and research methods

3.1 Introduction

This chapter outlines the methodology and research methods of this study. In order to explore understanding of climate change at the individual level within SMEs, I have adopted an interpretivist framework (Bryman, 1994). Focusing on how managers themselves make sense of climate change is an under-researched area. To date, there is less research on how SME managers understand climate change as a business issue than there is within other lay audiences. This is partly due to a tradition of positivist research within business greening that focuses on identifying the drivers and barriers to action rather than exploring understanding from the perspective of the individual. The objectification of the firm is ironic because the SME literature in general and the business greening literature in particular, acknowledges that the personal characteristics of the individual manager are key to how business greening is approached within the company. The emerging qualitative research that does seek individual understanding is not specific to the SME context yet shows climate change to be a complex, socially contested idea where values help to filter and frame what individuals think the concept means to them and how they act upon it.

As explained in section 1.4, this research sets out to address the following three main questions:

1. How do SME managers make sense of the complex problem of climate change?
2. What business greening behaviour have they and their businesses adopted and what are their motivations for doing so?
3. On what values do they draw to articulate their sense of climate change and their approach to business greening?

In addition, the main research questions are supported by a number of other questions, with the relationship to the main questions shown in brackets as follows:

- How do SME managers make sense of climate change? (1, 3)
- How do SME managers make sense of climate change as a business issue? (1, 3)
- How do SME managers understand climate change in relation to other environmental issues? (1, 3)
- How do SME managers describe their motivations to engage with business greening in relation to climate change? (2, 3)
- How do managers make sense of the messages they hear about business greening and climate change and where do those messages come from? (1, 2, 3)
- How do managers understand responsibility towards acting on climate change? (1, 3)
- How do managers act on climate change through their approach to business greening? (2, 3)

The methodology chapter is set out in the following way. Section 3.2 discusses the methodological choices in relation to the real world problem and research paradigms. The theoretical framework and sampling frame are also explained. Section 3.3 describes the research methods and the processes used to collect and analyse the data. The limitations, along with issues around validity, reliability and generalisability are discussed. Section 3.4 provides a summary of the chapter.

3.2 Selecting an appropriate methodology

This study was motivated by a need to address the 'real world' problem of how to engage SMEs with climate change (see section 3.2.1). Adler and Hansen (2012) acknowledge that PhD researchers may pursue their research in order to answer questions that are most important to them. Mohrman (2010) argues that the professional choices of all researchers are underpinned by their personal values and emotions, regardless of how objective they try

to be. She suggests that researchers gain from exploring and acknowledging their own values in order to understand what they study. This section will discuss the real world issues that have shaped my methodological choices. Drawing on wider literature, assumptions on the nature of social science will be discussed along with how an understanding of climate change in terms of a weak social constructionism links with a qualitative research design. I will explain how this fits with the idea of sensemaking and briefly clarify why I did not choose other potential approaches.

3.2.1 Reflection on real world problem

Prior to starting my PhD research, I worked in a business support role with Bedfordshire County Council (2002-2006) and the UK Environmental regeneration charity, Groundwork (2006-2008). I chaired the regional Sustainable Business Partnership and worked with a number of regional partners to design, fund and deliver support to help SMEs engage with business greening. Funding was primarily through European and UK-government programmes designed to encourage resource efficiency. The projects were successful, exceeding all funding requirements and I was excited by the synergy that we stimulated by bringing business managers, from all types and sizes of companies, together to work to improve their environmental impacts. However, over time, I realised that each new funding stream was far from innovative and was, more realistically, repackaging the same message to businesses. Although some new managers did get involved with each new round of funding, I recognised that we also tended to attract managers who had already been supported through previous projects.

During 2007, I became involved with the University of East Anglia's Community Carbon Reduction Programme (CRed) and helped to develop a business support programme within the Suffolk CRed partnership. I also worked with local authorities elsewhere in the region to encourage their adoption of the programme. As part of this, I was involved with a large company on the Britannia Industrial Estate in Luton. The infrastructure of the surrounding

area was old, indeed the business premises were aged and below street level. The company employed over 300 local people and was vital to local employment. The company had recently been sold to an American parent-company. When I left, I sat in my car, trapped in traffic on a hot summer's day and I reflected on what climate change might mean to this company and to the local community. I thought about how the new owners, with no commitment to the local area, might be reluctant to invest in infrastructure improvements and how the site was at risk from flooding and heatwaves. I thought the new owners were more likely to move the company to a greenfield site (or sell it) than to address these issues and I was concerned about that. I wondered why it was that the same managers addressed the environment in the same way each time and how we could move companies beyond financial wins to invest in adapting to climate change. This led me on to a path whereby I wanted to understand how business support could better support SME managers to engage with climate change.

3.2.2 Reflection on research paradigms and choices

A research paradigm is a way of framing (Buchanan and Bryman, 2007, p483) or collecting together beliefs about the world that shapes what can be understood and how research can be approached (Bryman, 2004, p453). Guba (1990) explains that within a research paradigm there are underlying assumptions about ontology, epistemology and methodology. He explains that the ontology of the inquirer refers to how he or she may understand the nature of reality; epistemology refers to the nature of the relationship between the inquirer and what can be known about reality; and methodology refers to how the inquirer should find out about knowledge (ibid, 1990, p18). Methodology can also be understood as a collection of techniques (Easterby-Smith et al., 2002, p31) which reflect the ontological and epistemological assumptions and suggest tools for data collection and analysis. In this way, methodological choices reflect the assumptions that researchers have about the nature of

reality and the nature of the knowledge that can be learned from reality (Easterby-Smith et al., 2002, p30).

Two significant methodological paradigms in social science research can be categorised as positivist or interpretive (Bryman and Bell, 2007) and can be used to illustrate how ontology, epistemology and methodology need to be consistent with each other. Easterby-Smith et al. (2002, p30) explain that normative approaches suggest positivist assumptions about the world, where researchers focus on objective explanations of causality through hypothesis testing to produce generalised models and theories based on data reduced to its simplest forms from large, randomised data samples. The positivist tradition is based on scientific methods (Susman and Evered, 1978, p583) and can be contrasted with interpretivist approaches. Interpretivist approaches, such as social constructionism, see the researcher as part of the research process with the research participants fully engaged with co-creating their sensemaking of the issue under consideration (Buchanan and Bryman, 2007, p486) and where the goal is to understand the issues by embracing the full complexity and richness of data (Easterby-Smith et al., 2002, p30).

The implications of research paradigms can be explained through methodological choices. In considering the underlying assumptions about the ontological 'reality' that I set out to investigate, I consider that there is a physical world out there but that the social world is also a consequence of human consciousness. In this, our reality is at least partly our own perception because it changes depending on where we are and who we are and what is important to us. In terms of research on organisations, I consider SMEs to be the result of the collective decisions of individual people, rather than entities in their own right. This means that individuals can change the systems they administer. My assumption is that social systems and institutions are created to maintain order and power relationships; that forces and influences come from human decisions and that organisations are social creations. Like

any researcher, my ontological position is reflected in what I believe we can know about the world. I consider Global Warming and the physical processes of Climate Change (capitals intentional) to be part of an external physical reality that may be measured by scientists who will offer explanations about this. Projections based on how the climate may change and what the physical implications of this may be for humans, environment and other life are based on scientific calculation and understanding. However, both concepts are also social constructions; that is to say the related 'social idea' (Hulme, 2009) of climate change (lower case intentional) goes beyond the acceptance of information and facts presented by scientists. Ideas about the environment as 'socially constructed' are relatively new. Macnaghten and Urry (1998) argue that the environment is not a given, external reality but a fluid concept that is culturally and socially grounded and contested. In particular, they argue that social practices, especially regarding where people live, produce reproduce and transform social value and create meaning. They argue that engagement needs to be researched using methodologies that 'represent and capture some of these ambivalent and multiple characteristics' (ibid, p3). In this, individuals make their own sense of climate change at a personal level as a product of their own consciousness. Where individuals are confused by climate change, it does not necessarily mean that they just need more information or statistics. They may be confused between the different ideas they hear and/or by the dissonance they perceive between the words and actions of government and business leaders. In this way, knowledge can be gained through experience but, more importantly, it can be acquired through reflection. Reflection enables new information to be understood by linking it with experience. Reflection can be stimulated by 'cues' (Weick, 1995) that force an individual to assess or reassess meaning. This means that knowledge can be a very personal journey. What we know about the social world is through the personal, subjective experiences of the individual.

The implications of the assumptions explained above in the context of this research is that how SMEs engage with climate change (also) needs to be understood through the individual and collective perceptions or knowledge of the people who come together to make up the firm. In particular, how the leader of the SME, or any person responsible for making strategic decisions, makes sense of climate change. In terms of what Burrell and Morgan term Human Nature (1979, p6), I adopt an intermediary position whereby I believe that humans can be limited by their environment and be conditioned by external circumstances (determinism), but also that SME owner-managers in the UK in the 21st Century are amongst those who have a relatively large degree of freedom to create their own environment (voluntarism). The social and physical world into which the individual is born affects his or her choices and perceptions but individuals have some choice in how they create their world in relation to external and internal parameters.

Having set out some of the assumptions underpinning my research, I now turn to how this has affected my choice of theoretical framework.

3.2.3 Theoretical framework

The underlying assumptions that I set out above (3.2.2) have an influence on the choice of theoretical framework. Should the social world be perceived largely as a hard, objective reality (as in positivism), my approach to research would be likely to focus on measuring the relationships and regularities between various elements. The objective would be to seek to identify and define; to discover facts and search for the universal laws that would explain and quantify that world. However, as I have explained, I do not see the social world in such positivist terms. I take the position of 'mild' social constructivism (Newton, 2011, p9) that, similarly to Hulme (2009), recognises climate change as an objective reality in one sense, but emphasises the importance of the subjective experience of the individual. This means that I

believe managers' interpretation of climate change to be an ongoing, dynamic process where research seeks to understand how the individual creates, modifies and interprets their world.

The choice of theoretical lens for this research is sensemaking grounded in the ideas of Karl Weick and, in particular, his seminal work on sensemaking in organisations (1995).

Sensemaking is compatible with social constructivism and, in the context of this research project, with the idea of business greening as an *emergent* process (Georg and Fussell, 2000, p176). The interest, then, becomes understanding the underlying motivations of those involved in business greening (Nijhof and Jeurissen, 2006, p316). Although sensemaking can be used as a generic term (see, for example, Brown et al., 2008, p1038), in this research I understand sensemaking as a process whereby 'people discover their own inventions' (Weick, 1995, p15) and construct their own reality (Nijhof and Jeurissen, 2006, p316) based on, and reinforcing, the world as they see it. Weick (ibid) explains, for instance, that problems do not just present themselves but need to be constructed and actively engaged with for a person to make sense of them. As a complex, 'messy' problem (ibid, p9) climate change is an idea that is assumed here to meet that criterion (see Hulme, 2009, preface xxviii) and where SME managers need to manage the ambiguity of conflicting ideas. In such situations, Weick argues, managers will begin the process of sensemaking by omitting information that does not fit with their own beliefs and values. For example, warnings that are perceived to be 'unbelievable' are often missed as they are discounted by the individual to help reduce uncertainty (Smerek, 2011, p10) and improve sensemaking of the situation.

Central to the concept of sensemaking as defined by Weick (1995, p17) is the need to understand the implications of the social world in relation to self-identity. Self-identity reflects how people see the world and their place within it. Values are at the core of identity (Hitlin, 2003, p119) and motivation (Schwartz, 1996, p121) and therefore play a crucial role in sensemaking. In this way, the exploration of values is critical to this research project because

values, imbued with ethical dimensions and cues and information, invoke different value-based emotional reactions which influence how information about climate change is received, filtered and acted upon. This will threaten or support the individual's adopted identity. In other words, and as Weick (1995, p133) put it: 'we see what we believe'. In the same way, individual's beliefs about their own responsibilities also link directly with the actions they are prepared to take and the policies they support; thus having important implications for the socio-economic consequences of climate change. Drawing on Rokeach (1968; see section 2.4.4), I understand beliefs to be an expression of values (ibid, p124) that may be conscious or unconscious and must be understood from what a person says or does. In a similar way to sensemaking being driven by a search for plausibility rather than accuracy (Weick, 1995 p17), Rokeach (1968, p113) draws on Jastrow (1927, p284) to see the individual mind as belief-seeking rather than fact-seeking. For this research, this means that an exploration of how managers appear to draw on their personal values is central to understanding how they make sense of climate change.

3.2.4 Sampling frame

The unit of analysis in this study is the SME manager; this section discusses how I defined SMEs and managers in order to define the scope of my sample.

SMEs are often described by their size (e.g. Mukhtar, 2002; BERR, 2007). However, personal experience with EU and UK government-funded environmental support projects for SMEs suggest there is confusion in practice as to how size is applied to defining SMEs. For example, funding guidelines may or may not include sole traders and partnerships, perhaps depending on whether the 'beneficiary' is seen as the individual manager or the business. Larger SMEs are often more desirable as research project participants as their environmental impacts are clearer and there are greater opportunities to deliver financial and resource efficiency savings. Very small or micro businesses may be seen as more difficult to research

because their environmental impact is difficult to demonstrate (Brammer et al., 2011; Vickers et al., 2009) and they are less likely to be affected by environmental legislation. For the purposes of this research, the BERR (2007) definition of a SME was used: an independent company (not a sole trader or partnership) with fewer than 250 employees.

SMEs are understood to differ from each other and from larger businesses due to characteristics related to their size. For example, Grey and Mabey (2005) found that, even after excluding micro-firms and self-employed individuals, smaller firms demonstrated more informal approaches to management than larger companies. My practitioner experience suggests that, once companies reach in the region of 60+ employees, they are increasingly likely to use formal systems, such as an externally accredited environmental management system. Experience of working with SMEs in Bedfordshire showed that larger SMEs are more likely to be owned by a parent company. This could make it more difficult to speak with the owner-manager or with a manager whose individual values motivated the business approach to greening. With the focus of this research being on the individual, I chose to prioritise smaller SMEs.

The focus of this research is on SMEs within the East of England region and, in particular, businesses located in the counties of Bedfordshire, Cambridgeshire, Suffolk and Essex. This decision was based mainly on local knowledge of networking groups and business support organisations. The region is also the driest and most low-lying area of the UK and particularly vulnerable to climate change. The UK Climate Impacts Project (UKCIP, 2003) expects the East of England to be affected by climate change through drought, heat waves, flooding and sea level rise with an increasing risk of physical damage from high winds. The region is also promoted as the 'ideas region' of the UK (EEDA, 2011, p22) and as highly innovative in developing climate solutions. The region is linked with the supply of UK energy via European gas pipelines from the North Sea; renewable energy from the UK's largest off shore wind

farms in the North Sea and nuclear energy from Sizewell in Suffolk. Environmental issues specific to the region include congestion from a poor east-to-west transport infrastructure and high transport load to and from the container ports of Felixstowe and Harwich. I have described the geographical context here in some detail as managers' responses and perceptions of climate change (see section 2.5.3) are likely to be affected by their location.

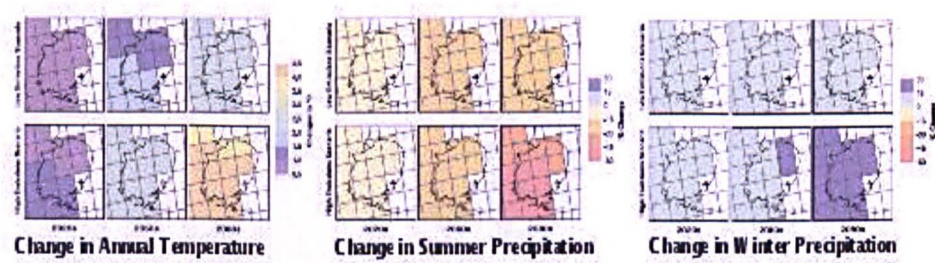


Figure 3.1: East of England High and Low Emissions Climate Change Forecasts 2020-2080 illustrating how the East of England is expected to experience hotter, drier summers with increased winter precipitation (UKCIP, 2003)

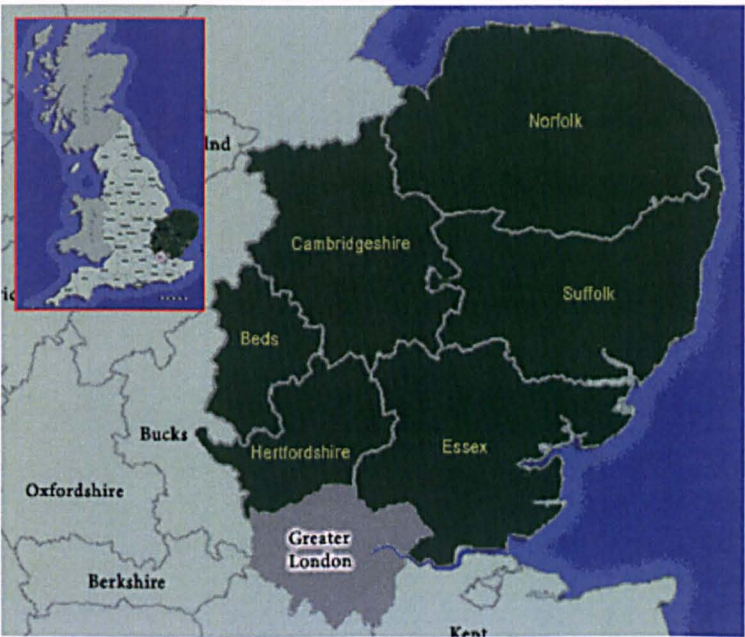


Figure 3.2: Location of the East of England within the UK and the counties of Bedfordshire, Cambridgeshire, Suffolk and Essex (image: www.Picturesofengland.com)

Many research papers compare differences in environmental approaches between industrial sectors (e.g. Revell and Blackburn, 2007); indeed, different sectors may experience differences in governmental policy and support towards business greening. For example, there is currently more legislation (and business support) targeted at manufacturing companies than those seen to be part of the service sector. Manufacturing companies may also experience or anticipate more supply chain interruptions due to extreme weather or socio-economic instability. Other SME research proposes that industrial sector is less important than lifecycle of the individual business. For example, neither Mukhtar (2002) nor Baden et al. (2009) found any differences between sectors but Baden et al. (2009) did find differences dependant on respondents' descriptions of their business as either 'start up', 'growth ' or 'mature'. The conclusion of the pilot project carried out for this research (Williams, 2009) suggested that managers in SMEs (within different sectors) appeared to understand climate change in both a professional and personal sense and drew on both. In looking to engage individuals with a range of experiences, this research did not focus on particular sectors but instead looked to understand how the different facets of the business context formed part of how managers make sense of climate change.

In deciding which individual(s) to talk to within each SME, the SME literature (see, for example, Lloyd-Reason and Mughan, 2002; Baden et al., 2009; Gray, 2002; Hammann et al., 2009) suggests that the owner-manager is the dominant focus and that the development of the company could be seen to reflect this individual persona. For example, Lloyd-Reason and Mughan (2002) argue that the main determination of SME behaviour in terms of internationalisation is the 'cultural-orientation' of the owner-manager defined partly as their personal degree of openness, willingness and adaptability. Another possible reflection of the importance of the 'person at the top' in an SME is that small companies tend to have a relatively flat organisational structure, with usually one (Hankinson et al., 1997) and no more

than three (Mukhtar, 2002) levels of authority where the owner-manager takes responsibility for everything in the firm (Hankinson et al., 1997; Mukhtar, 2002). This means that although the owner-manager has very little time to spend on strategy and reflection (Hankinson et al., 1997) he or she often takes personal responsibility for the approach of the business. Certainly the managers interviewed for the pilot project (Williams, 2009) described a personal responsibility for climate change through their business actions. I therefore chose to interview the owner-manager wherever possible.

An alternative to the owner-manager may be what Lloyd-Reason and Mughan (2002) refer to as the 'strategic leader' (p120) or the 'main person in charge of strategy' (Baden et al., 2009). This is likely to be the owner-manager or another senior director (ibid, p433). The chosen research respondents in this research were, therefore, the individual(s) who were designated as responsible for strategy: the owner-manager or a senior director. Hankinson et al. (1997) found that the preferred title within an SME for the strategic decision maker is managing director, even though they may or may not be the owner-manager as well. In the interview schema, individuals were prompted to discuss their role within the business.

During the preliminary test interviews, I found that the person responsible for strategy wanted me to also interview their Environmental Champion as they had delegated at least part of their environmental role to them, and these Champions often had a more detailed understanding of the environmental actions taken within the company. While the actions *per se* were not the main focus of the research, it was often the case that the Champion could offer additional perspectives on the strategic decision maker's approach to business greening as well as offering their own motivations and understanding of climate change. Where I interviewed the Champion first, they could help me gain access to the strategic decision maker. For clarity, in this thesis, the Manager is coded M while the Champion is coded C.

Table 3.1 Research Participant Details

ID Code	Gender	Age	Position in Company	Company Sector	Company Size	Access via	Interview Date
M1	Male	55- 60	Director	Manufacturing	80	Pilot project	12.04.2011
C5	Female	45- 50	Solicitor	Legal Services	60	Pilot project	06.05.2011
M5	Female	40- 45	MD/O	Hospitality	5	Pilot project	11.05.2011
M6	Male	45- 50	MD/O	Hospitality	5	Pilot project	11.05.2011
M7	Male	35- 40	MD/O	Transport	11	Pilot project	31.03.2011
M8	Male	35- 40	MD/O	Food Logistics	15	Pilot project	28.06.2011
M9	Male	45- 50	MD/O	Transport	5	Pilot project	28.03.2011
M10	Male	45- 50	MD	Architects	60	GBN ¹	10.11.2010
M11	Male	35- 40	FD	Architects	60	GBN ¹	10.11.2010
C1	Female	45- 50	Architect	Architects	60	GBN ¹	10.11.2010
M12	Male	45- 50	MD/O	Logistics	25	GBN ²	17.11.2010
M13	Male	60-	Volunteer ⁴	Community	16	GBN ²	02.11.2010

		65		Centre			
M14	Male	50-55	MD/O	IT Services	25	LCC	09.02.2011
C2	Female	25-30	Office Manager	IT Services	25	LCC	09.02.2011
C3	Female	25-30	Administrator	Voluntary	12	LCC	10.02.2011
M15	Female	50-55	MD/O	IT Services	7	LCC	09.02.2011
M16	Male	45-50	MD/O	Fire safety Service	5	PECT	07.03.2011
M17	Male	55-60	MD/O	Marketing	12	Beacon Lunch	16.05.2011
C4	Male	45-50	HSE Manager	Manufacturing	80	CQI	28.03.2011
M18	Male	30-35	Franchise Partner	Catering	65	Beacon Lunch	21.06.2011
M19	Female	50-55	MD/O	HSE Consultancy	30	Beacon Lunch	24.06.2011
C6	Female	30-35	Systems Manager	HSE Consultancy	30	Via M19	24.06.2011
C7	Female	35-40	Senior Auditor	Engineering Services	20	Linkedin 2Degrees Forum	30.06.2011
M20	Male	50-55	Managing Partner	Legal Services	60	Via C5	19.07.2011
M21	Male	45-	Operations	Equipment	50	REE	01.07.2011

		50	Director	Distributor			
C8	Female	40- 45	Marketing Manager	Construction	14	Cranfield University event	03.08.2011
M22	Male	45- 50	MD/O	Management Consultancy	15	Bistro Live	05.08.2011
M23	Male	50- 55	MD/O	Distribution	10	Bistro Live	09.08.2011
M24	Female	50- 55	MD	Manufacturing	27	REE	11.08.2011
M25	Male	45- 50	MD/O	Equipment Refurbishment	12	Via employee	11.08.2011
M26	Male	45- 50	MD/O	Marketing Consultancy	8	Via employee	12.08.2011

3.3 Research methods and processes

In this section, the methods and processes used to conduct the research will be described, along with approaches to data collection and analysis. The section begins by describing the approach to sample selection before explaining how data was collected. The process for developing the interview questions is explained. A detailed explanation of how data analysis was approached is given before discussing the validity, reliability, generalisability and limitations of the research.

3.3.1 Approach to sampling

In addition to giving details about the interviewee and the SME within which they worked, Table 3.1 (above) summarises how I accessed the managers who participated in this study. I took a purposeful sampling approach (Patton, 1990) to identifying participants. An

acknowledged limitation of the pilot project (Williams, 2009) was that the research focused on environmentally proactive SMEs. This focus was partly because I had been able to access them through local environmental business support organisations. To try to mitigate such bias in this project, I expressly undertook to interview managers who were not involved with, or who had only very recently accessed, environmental support.

In October 2010, I carried out three preliminary test interviews to practice the research questions. These were with managers that I was personally familiar with and therefore I did not include their interviews within this study. Although two of the three test interviews were with managers known to be dismissive of environmental concerns, they described a coherent environmental approach not dissimilar to the previous pilot study interviewees. In order to understand the difference between the findings of my pilot project and the interviews for this study, I therefore approached the managers who had taken part in the pilot project (Williams, 2009). Seven out of the original nine pilot study managers were re-interviewed between March and June 2011⁴. From this, it was clear that business greening had risen up the business agenda within the preceding two-and-a-half years. Brammer et al. (2011) confirm that the majority of SMEs are likely to be engaged with some form of environmental activity. Re-interviewing the pilot study managers was helpful for two reasons: firstly, they helped me to make sense of the greater than expected engagement with business greening of the test and early interviews (November, 2010 to March, 2011). Secondly, through the re-interviews it became clear to me that the pilot study managers could no longer be considered pro-environmental in comparison with their peers. However, in order to access a wide range of responses, I purposely sought to interview more environmental 'resistant' (Tilley, 1999a) managers.

⁴ The remaining two managers were found to have changed employment and to be non-contactable.

In order to access respondents with a range of environmental responses, I used a number of different approaches. For example, I asked my business contacts if they could introduce me to contacts who had expressed negative or dismissive ideas about business greening or climate change. GBN¹ and GBN² were accessed in this way. Access to managers from the Beacon Lunch, a Bedfordshire County Council general business networking group, was via an open invitation to attendees after facilitating a discussion at their lunch meeting. I attended the evening meeting of the local Chartered Quality Institute (CQI) by invitation of the organiser (a GBN member) who allowed me to network with the express purpose of recruiting potential interviewees. I met C7 following a discussion I initiated on the online LinkedIn 2Degrees Forum where I posted a question regarding business and climate change. We then arranged to meet for the face-to-face interview. I also met managers via a business innovation event hosted by Cranfield University and from networking at a 'Bistro Live' event and through personal contact with employees.

Of the thirty-one managers interviewed, twenty were male and eleven were female. All but two managers were of White British origin, with M9 of Black Caribbean and M18 of Asian ethnicity. Fifteen managers described their role in the company as the managing director and owner (MD/O), with a further six at director or partner level. Champions came from a range of work roles including middle management, administration and professional. Of the eight champions interviewed, seven were female. The age of managers ranged from 35 to 65 with four of the Champions being under 30 years old. Managers were involved with the running of companies from a number of different sectors, including manufacturing, logistics and hospitality. The number of employees ranged from 5 to 80; with four managers employing five or under (micro businesses), eighteen employing fifty or under; and nine running companies employing between 50 and 80 staff. This means that most companies were small rather than medium sized.

3.3.2 Approach to interviewing

All managers were interviewed face-to-face at premises of their choice between November 2010 and August 2011. The interviews were usually undertaken at the manager's place of work. In line with the Open University Ethics Committee approval received for this research, the purpose of the research was explained and managers were advised that they could stop the interview at any time or refuse to answer any question with which they felt uncomfortable. Their verbal and written permission was sought to digitally record and transcribe the interview and they were reassured that they could speak in confidence with their identity being protected. All participants gave written consent to agree to their participation in the research (Appendix 1).

Each interview took between 60 and 75 minutes and took a semi-structured approach whereby managers were encouraged to speak openly and to reflect on, and express, their own ideas in their own words (Oppenheim, 1992). Open ended questions regarding the business and the manager's role in the business were used at the start of the interview to help put the manager at ease. I emphasised that there were no right or wrong answers and that it was their ideas that I was interested in. I then 'worked backwards' in that I asked them to talk about what they did in the business regarding the environment first before asking them about their business approach to the environment; their own motivations for greening and what they thought about environmental issues such as climate change. This meant that managers were most relaxed in front of the recorder and talking freely by the time I got to the part of the interview which was of most interest – their personal reflections. All managers said that they enjoyed the experience and several commented that they had never thought about the issues under discussion in such depth before and found it useful.

While the social interaction between the researcher and the interviewee is sensitive and includes assumptions based on dress, body language, context and surroundings (Easterby-

Smith et al., 2002, p89), I believed it was important that I did not share my own views with the managers so that I did not influence them or give them a sense that they had given an answer that had met with my approval or not. In this, I consciously tried not respond to the participants in any way that would suggest that they had given me an answer that I was looking for. I tried to be aware of my own body language and to allow participants to talk while also probing areas of interest through further prompting. I did not consider the interviews a shared conversation (c.f. Howell, 2013). The interviews were not about me; I was there to trigger a process that allowed managers to make sense of their own ideas by talking (Wiles et al., 2005, p90). However, despite this awareness and the rigour with which I analysed the data, in my sensemaking of their sensemaking, it is important to acknowledge that I constructed a new reality (Watson, 1995) and that researcher reflexivity will inevitably affect how I interpreted the interviews (see, for example, Nordhagen et al., 2012). As other commentators note, (e.g. Adler and Hansen, 2012; Mohrman, 2010) the emotions and values of all researchers underpin the choice of subject, regardless of proposed objectivity.

3.3.3 The interview questions

Figure 3.3 below shows the questions that were used as prompts to encourage managers to explore their understanding of climate change and business greening. Development of the questions was an iterative process. For example, I reduced the number of questions that I used and developed a hierarchy of prompts after reflecting on feedback from my supervisors and from the responses of the test interviews. This helped me to improve the clarity of questions and to focus on key ideas. In total, I had five iterations of draft questions and reduced the number of prompts from a list of 43 questions to ten main questions with a further 16 secondary prompts. This allowed me to ask all managers the same main questions while using the secondary prompts as probes to explore key areas.

Sandberg and Alvesson (2011, p.25) highlight the dominant approach of 'gap-spotting' which, they argue, is based mainly on reinforcing existing theories. My aim was less to 'gap-spot' than to question assumptions that underlie managers' motivations to engage with the environment. For example, while the literature review in Chapter 2 identified financial benefits as a motivation for greening (section 2.3), rather than assume this would be a motivation, I first asked managers to talk about their approach to business greening before asking why they did this as an open-ended question. I only prompted clarification with regards to saving money if the issue was left unaddressed.

I developed the research questions from a number of directions. For example, the pilot study asked managers for their thoughts on climate change and why they thought they held the views that they did. I refined these questions to ask managers about what climate change meant to them in order to encourage a more personal and reflective response. From the test interviews, I also added questions asking how ideas about climate change and business greening had changed over time. Informal discussion with staff and managers involved with the Low Carbon Champions (LCC) project; a partnership funded by the European Union and the East of England Development Agency also helped me develop my questions. Delivered through the regional business support organisation the Green Light Trust, the LCC project had the purpose of engaging SMEs with carbon reduction and was framed in terms of improving business sustainability in the face of rising natural resource costs. The organisers deliberately avoided setting the project in the context of climate change as they believed this would discourage managers from getting involved. Although my introduction came from an invitation to evaluate the project, I did not get involved due to concerns about academic integrity; I did however find the discussions helpful in forming questions regarding the role of the manager in the business and how they saw their role in the business approach to greening.

Questions were also developed through my own reflection and experience of working with SMEs to engage with business greening. For example, reading Moghariya and Smardon's (2012) study on rural perspectives towards climate change in India, I asked myself what climate change meant to me and reflected that how I made sense of this would depend on who and where I am, when, what was important to me and what people around me were saying about it. What I then went on to do about it would depend on whether I felt I could or wanted to take action, and whether I saw any point in doing so. I related climate change to my own environmental journey and to both a personal lack of voice and to the empowerment that came through working with others. From this personal reflection came the direct question: 'what does climate change mean to you?' along with other prompts related to climate change in relation to other issues of concern and what participants felt could be done about it. My previous experience, and the literature review, helped me to develop questions regarding the approach to business greening.

Figure 3.3 Interview questions and additional prompts

Key:

Main Questions

- Additional prompts

- Can we start off with some brief background about the business?
 - Can you tell me (remind me) about what your business does and your role in this?
 - Where do you see the business going in the future?
 - How do you see your business in the wider marketplace?
- How do you view environmental issues in your business?
 - What sort of environmental things do you do?
 - What is your role in this?
- Why are you doing them?
 - How has environmental legislation influenced what you do?
 - What about saving money through efficiency gains?
 - Or other business issues like competition, reputation, tendering?
- How do you see your own role in this?
 - Are there any particular issues that influence what you do?
 - How have your ideas about this changed over time?
- What do you think other business like yours think?
 - Have you seen a change in how businesses think about greening (since we last met)?
 - What messages do you hear about being greener at work?
- What bigger issues do you link being greener with?
- Where does climate change fit into that?
- What does climate change mean to you?
 - How have your ideas about climate change changed over time
 - How do you think other people make sense of climate change?
 - What do you think other companies like yours think about climate change?
 - And what about business greening – how is it linked or separate?
- What do you think should be done about climate change?
- What does climate change mean to you in relation to other issues of concern?

3.3.4 Data analysis

All interviews were transcribed word-for-word by a professional transcription service within two-weeks of the interview. On receipt of the transcript, I listened to the recording and went through the transcript to check for accuracy, correcting any minor omissions or errors. I also checked the transcripts against my field observations to add any additional comments not picked up by the recording, such as noting emotional reactions to questions and changes in body language. I then began an iterative process of reading and re-reading transcripts to identify the main themes and codes. It became clear from this that each individual manager was making sense of climate change in a number of different ways and that there was no clear, single motivation for business greening. I then used codes developed from the dimensions of sensemaking identified by Weick (1995) (table 3.2 below) to start reducing the data to explore where interviewees seemed to be talking about the different aspects of sensemaking, with additional codes for business greening and climate change (See Appendix 2 for example using data for M25).

I used Table 3.2 as a template to analyse and organise the interview transcripts more closely. I looked at each line and plotted it into the table. My goal with this was to start reducing the data into something that I could work with in a way that would allow me to explore both the case of each manager and between cases of different managers. In doing so, I started to notice patterns that I had not seen on reading the interview transcripts as a whole. For example, I saw that M14, whilst describing how much he wanted to improve the environmental performance of his business largely countered these wishes with barriers. Compared with other managers in this first iteration, M14 was describing many more barriers to action and appeared to be talking 'greening' without actually taking any action.

Table 3.2: Initial coding table reflecting sensemaking and pilot study themes

M #		Self	Business	Greening Role	Environment / Climate Change
	Identity				
	Emotions				
	Values (retrospective, how formed)				
	Social (info / influences where from)				
	Ongoing (how changed / changing)				
	Plausibility (Constructions)				
	Cues / triggers (drivers)				
	Enactment				
	Responsibility				
	Barriers				

After completing five initial analyses, I reflected on the tables and made the decision that the tables were unwieldy and contained too much information. I was not only struggling to make sense of the data but seemed to be producing more data without understanding it. I decided that I needed, firstly, a way of picking up information on values and, secondly, a way of understanding when, where and how managers were expressing them. This seemed to be provided by the Schwartz Value System (SVS). I used the Appendices in Ralston et al. (2011) to create a summary table of the SVS (see Appendix 3). This was significant in helping me to

identify and map values. In the context of this current research, the SVS is academically acknowledged as a useful way of mapping and understanding values. Building on section 2.4.4, I drew on Schwartz (1996) in the tradition of Rokeach (1968) to understand values as a well-defined construct (Agle and Caldwell, 1994, p359) relating to motivational needs. Apart from two mixed methods studies by Enz (1988), research on values has predominantly taken a survey-based approach (Agle and Caldwell, 1994) despite the acknowledgement that the least reliable way of understanding values is through self-completed surveys (Agle and Caldwell, 1994, p371). More recently, however, a small number of studies (Miroso et al., 2013; Crompton and Kasser, 2009; Onkila, 2009) have set a precedent for using the SVS as a framework for exploring values in interpretive approaches. The SVS (ibid. see Appendix 3) is acknowledged as robust at the individual level across 50 societies (Ralston et al., 2011, p18). My use of the SVS is in line with the approach of Miroso et al. (2013) and is not to contribute towards value theory but to understand the role of values in sensemaking.

Re-reading a number of transcripts using the SVS framework, I realised that the narratives did suggest different values and I reorganised my coding accordingly to create three main tables for each manager, covering climate change, business greening and values (Appendix 4). This approach fits with the ideas of Braun and Clarke (2006), who suggest that themes in qualitative research do not just emerge but instead actively reflect the interests of researchers (ibid, p.80). I then re-analysed three of the interviews that I had already coded using these second tables and found that this approach offered me greater insight into values, along with their sensemaking of climate change and business greening (see Appendix 5 for example using data for M25). Within the values table, I used the individual level values (sub-dimensions) and their associated individual level **marker** values to code the data. Within climate change, I drew on Weick (1995) to code for references to identity, both in terms of self and place; how managers constructed or framed climate change; ideas about responsibility for acting on climate change; what managers identified as cues to their sensemaking; and

references to social influences. Within business greening, I coded for the mix of motivations; links made with climate change; explicit references to environmental values; their environmental actions within the business; barriers to action; and references to on-going change within business greening.

The approach can be described as narrative analysis because, as Wiles et al. (2005) explain, I used the data from the interviews in the form of text to interpret meaning based on the assumption that individuals construct their world through talk (ibid, p90). The following example demonstrates how narrative was coded. It can be seen that one piece of text can be coded more than once.

Sample text:

M25: *"If I don't run the business, Africa will suffer, what I do out there, so I've got to keep it going, if I don't get the business right my wife is going to suffer, if I don't get the business right, I mean it's no good collapsing a business, because my business sustains 17 people. So it's got to be running right, and if one person's going to let it down, to be honest, I'll get rid of them because I can't watch 17 people go under"* (p13).

Values: Power; authority, the right to lead and command

*"If I don't **run the business**, Africa will suffer, **what I do out there**, so I've got to keep it going, if I don't **get the business right** my wife is going to suffer, if I don't **get the business right**, I mean it's no good collapsing a business, because **my business** sustains 17 people. So it's got to be running right, and if one person's going to let it down, to be honest, I'll get rid of them because I can't watch 17 people go under".*

In the above example, the key words highlighted illustrate power and authority. M25 is in charge of his business; he leads it; he controls and commands it. The business is about what

he does and he requires those working for him to work his way in order for it to be right.

Onkila (2009) takes a similar approach whereby analysis included the use of key words to help to categorise and code sentences for values.

Values: Benevolence; responsible, dependable, reliable

*"If I don't run the business, **Africa** will suffer, what I do out there, so I've got to keep it going, if I don't get the business right **my wife** is going to suffer, if I don't get the business right, I mean it's no good collapsing a business, because **my business sustains 17 people**. So it's got to be running right, and if one person's going to let it down, to be honest, I'll get rid of them because **I can't watch 17 people go under**".*

The reference to Africa is to a specific community group that M25 is working with in partnership with a local community Church where he described how he had bought land, built an orphanage and is growing food crops. The reference is therefore attributed to Benevolence rather than Universalism on the basis that the concern is specific to a group of people of direct concern, rather than Africa, or people living in poverty, in general.

This section was also coded under 'climate change; responsibility' because the text was in the context of M25 explaining how he believed responsibility for climate change began with 'the man in the mirror' and described his work in Africa as his own bit of 'anti-global warming'.

A similar approach to using interview narrative to explore values is shown by Mirosa et al. (2013), who look at how individuals describe their motivation to engage with energy efficiency at home. In personal correspondence (email 11th September 2012) with the lead author Miranda Mirosa explained that while *"some of the values are made explicit in the narratives, many are simply implied and it is a judgement call on the behalf of the coder"*. This is a view supported by Onkila (2009), who found that some values were openly expressed and others

were presented as '*hidden meanings in the text*' (ibid, p290). Indeed accessing values via narrative is very much in the tradition of Rokeach. He used narrative samples to check the consistency of his values theory by counting references to 'freedom' and 'equality' (1968, p171) in a 25,000 word political text. Rokeach went on to give in-principle support for qualitative methods as a way of 'reliably identifying' values (1979, p58) by supporting the qualitative method of Content Analysis. In order to recognise both the explicit and 'hidden meanings', I chose not to use an electronic coding, storage and retrieval tool, such as Nvivo. Instead, I wanted to be immersed in the data so that I could be aware of the subtle differences and nuances that can be lost using electronic systems (Wiles et al., 2005, p90-91).

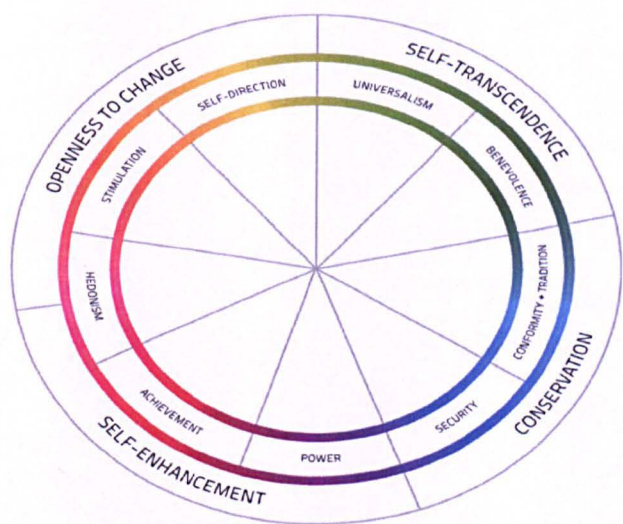
I moved within and between cases in an iterative way to check the consistency of my coding, making changes and erring on the side of caution where applicable. For example, if I was not sure where a piece of text related to one value or the other, I placed it under both codes. As the data built up for each case, a pattern would appear that was consistent within each case. For example, managers drew on either Power or Achievement as a self-enhancing value but not both. All managers drew on one self-enhancing value along with marker values from within self-transcendent, conservation and openness to change.

When I had completed the coding for each manager, I began to explore between cases within each code. For example, taking out all of the references to the marker value for wealth, I organised these on a sheet of A3 paper in the form of a mind map in order to explore and interpret the themes within the data. This produced more detailed codes. For example, in exploring the construction of climate change a number of frames were apparent, including weather, energy and the depletion of natural resources. I then explored within each of these codes to understand in greater depth what managers meant. For example, in seeing climate change as changing weather, managers described how the changing weather meant that

they could see and personally experience climate change and they related this to a blurring of the seasons, extreme weather and weather chaos, along with confusion about attributing these observed changes to climate change. I then produced a detailed report on each code, which became the basis of my findings chapters.

In order to visualise patterns between values, I used the Schwartz Circumplex Model (Schwartz and Boehnke, 2004) to help me see how individual managers drew on different values and how different patterns between managers emerged. This model reflects values as a continuum where individual level values can be seen in relation to other individual level values within their group. The model emphasises how some values complement others and these are shown as neighbouring values; while also reflecting tension between values across the two axes of self-enhancing; self-transcending and openness to change; conservation.

Figure 3.4: The Schwartz Circumplex Model (from www.valuesandframes.org)



3.3.5 Validity, reliability and generalisability of data

Although reliability and validity have different meanings depending on epistemological perspective (see table 3.3, below) they can be addressed through the use of 'Triangulation' (Bryman, 1984), whereby additional sources of information are used to back up the original approach. Bryman explains that, although triangulation can be seen as looking at data in different ways or having different observers or researchers checking claims, it is more than this: triangulation is combining different epistemological perspectives to imply that the result is a more 'reliable view of the world' (ibid, p85-6). For example, one source of triangulation relevant to this research could have been to look at internal and external company documents to see how they reported on climate change, their approach to greening and the environmental actions undertaken. However, I did not triangulate the data in this way because by taking a social constructionist approach (see 3.3.5), I wanted to focus on how the individual manager made sense of the issues and was not looking for an objective audit of what environmental actions were carried out or what the official strategic documents said about responding to climate change. In retrospect, I can see that it would have been interesting to explore how the personal perspective compared with the public perspective and to ask managers about this and to then triangulate the latter with company documents. I would argue that this is a different research question to that which is asked in this research and one for a future date (see Section 7.5.4).

Another way of triangulating interview data is to give participants the opportunity to respond to summary notes from their interview. I offered this to the test participants: one did not respond and the other two offered no additional comments and just confirmed that my summary was fine. I had also offered participants in the pilot project the opportunity to input in this way and they too did not offer additional comment. Accordingly, I used other opportunities to test my early observations. Initially, I explored emerging themes with my supervisors but later also invited other expert comment by presenting at the Corporate

Responsibility Research Conference (Williams and Schaefer, 2011, 2012); the Open Social Marketing Conference (2012) and the annual Conference of the Institute of Small Business and Entrepreneurship (Williams et al., 2012). I was also invited to take part in an event organised by the EU Directorate for Enterprise and Industry to share my work with academic and practitioner guests from across Europe (Berlin, 2012; event report available at www.sme-advisors-on-csr.eu/files/event_report/application/pdf/event_report.pdf).

Table 3.3 is drawn from Easterby-Smith et al. (2002) to provide clarity on how the concepts of validity, reliability and generalisability are understood from different epistemological perspectives. In this way, my approach to these concepts is consistent with a social constructionist perspective. The interview data (see Appendix 4) demonstrates that my approach sufficiently enabled the managers participating in my research to express their experiences. In 3.3.4, I demonstrate the transparency with which I made sense of my data. Finally, I have been able to demonstrate generalisability to other settings by using my findings at two Bedfordshire Green Business Network (GBN) seminars (see section 7.5.3). The first seminar used my early findings to explore different ways of thinking about climate change and explicitly re-framed climate change into the language of Achievement values. Secondly, I used later findings to help a further 30 managers look at an alternative way to engaging staff and directors with business greening. The managers attending both seminars confirmed that the ideas provided a useful approach that was applicable to their situations.

Table 3.3 Perspectives on validity, reliability and generalisability (From: Easterby-Smith et al. (2002, p53)

	Viewpoint		
	Positivist	Relativist	Constructionist
<i>Validity</i>	Do the measures correspond closely to reality?	Have a sufficient number of perspectives been included?	Does the study clearly gain access to the experiences of those in the research setting?
<i>Reliability</i>	Will the measures yield the same results on other occasions?	Will similar observations be reached by other observers?	Is there transparency in how sense was made from the raw data?
<i>Generalisability</i>	To what extent does the study confirm or contradict existing findings in the same field?	What is the probability that patterns observed in the sample will be repeated in the general population?	Do the concepts and constructs derived from this study have any relevance to other settings?

3.3.6 Limitations of the research

The goal of qualitative research is not to measure how many managers think or respond in a way that may be consistent over large populations; neither is the goal to identify causal factors and influences on causes of behaviour. Instead, the data is consistent with a goal that seeks to explore individual understanding within and between a small number of cases (Yin, 1984). A potential limitation of this research may be that the managers studied were all from

the East of England and this may mean that the findings are not generalisable to other parts of the UK or Europe. Opportunities to address this will be discussed under Future Research (section 7.5.4). This study focuses on managers from small companies only and does not say anything about how managers within larger, medium sized companies (that is, with 100-249 employees) who may have more formal company structures and parent companies may make sense of climate change or their approach to business greening. In a similar way, managers within large businesses (>250 employees) may lack opportunities to have strategic control and demonstrate personal motivation and understanding. This study does not attempt to make any claims regarding managers in larger companies but does point towards further research (7.5.4).

3.4 Summary

In this chapter I have described in some detail my approach to the methodological choices underpinning this research. I have explained why understanding how SME managers draw on their personal values is central to understanding how they make sense of climate change. I have argued that this is consistent with a social constructionist approach in two ways; firstly, climate change is both a physical problem and a socially constructed idea and, secondly, managers will make sense of climate change by using their values to help them filter information, frame ideas and motivate engagement. A sensemaking approach (Weick, 1995) is also consistent with these ideas. Firstly, self-identity can be seen to play a key role in sensemaking and values can be seen to underpin self-identity and, secondly, where sensemaking is a search for what is plausible rather than what is true; in a similar way, values are belief seeking rather than truth seeking.

I have also described in detail the methods that I used to collect and analyse the data for this research. I have shown how the research has gained access to the experience of managers in order to demonstrate validity. Through the transparency of my data analysis, I have

demonstrated that my research is reliable and builds on an emerging approach to the use of values in qualitative approaches. I have shown that my results are generalisable to other settings through two practitioner seminars that applied my findings to real world problems. I have also acknowledged the limitations of my research and in doing so, pointed the way towards future research.

In chapters 4, 5 and 6, I will discuss the findings of my research. Chapter 4 looks in depth at the values on which managers drew in order to articulate their sense of climate change and their approach to business greening. Chapter 5 investigates how managers make sense of climate change. Chapter 6 looks at how managers act on climate change and their approach to business greening.

Chapter 4: Drawing on values

4.1 Introduction

Chapter 3 explained how narrative analysis was used to infer the values that managers drew upon from their interview transcripts about climate change and business greening and how the Schwartz Value System (SVS) was used to code these values. This chapter explores the type and nature of the values that managers drew on by identifying the individual marker values revealed in their interview narratives. The chapter looks at the values drawn upon within a specific context and is not meant to be a definitive assignment of values to individuals.

Section 4.2 will introduce four managers who will be followed closely through this and the next two chapters. The four managers were chosen as case studies to illustrate how different values are woven throughout individual narratives. Section 4.3 will explore how managers drew on the two self-enhancing values of Power and Achievement. Section 4.4 will similarly explore how managers drew on the self-transcending values of Universalism and Benevolence. Section 4.5 will explore the other values that managers drew on. Section 4.6 will provide a summary of the chapter.

Table 4.1 (below) provides a summary of the values that managers appeared to be drawing on and is intended as an overview. Tables later in the chapter show how managers were drawing on these values in detail. It can be noted that in terms of self-enhancing values, managers drew on either Power or Achievement. Only managers drawing on Achievement also drew on Universalism and even fewer, on the value relating to protecting the environment. Benevolence values were illustrated by managers drawing on both forms of Self-enhancing value.

Table 4.1: The values that managers drew on in their interview narratives

Key: Female managers are highlighted in yellow; Managers drawing on Power are highlighted in green. Male managers drawing on Achievement are shown in white.

	Self-enhancing				Self-transcending							Openness					Conservation														
	Power		Achievement		Universalism				Benevolence			Self-direction					Tradition		Conformity			Security									
	1	2	3	4	1	2	3	1	2	3	4	5	6	7	1	2	3	4	1	2	3	4	5	1	2	1	2	3	1	2	3
C1																															
2																															
3																															
5																															
6																															
7																															
8																															
M5																															
15																															
19																															
24																															
M1																															
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C4																															
M11																															
13																															
14																															
17																															
21																															
23																															
25																															
26																															
Key:	1	2	3	4	1	2	3	1	2	3	4	5	6	7	1	2	3	4	1	2	3	4	5	1	2	1	2	3	1	2	3
	1. Social power				1. Influential, having an impact			1. Equality				1. Loyal, faithful to my friends, group					1. Independent, self-reliant, self-sufficient		1. Respect for tradition		1. Politeness, courtesy, good manners			1. Social order, stability of society							
	2. Public image				2. Successful, achieving goals			2. A world at peace, free of conflict				2. Honest, genuine, sincere					2. Choosing own goals, selecting own purposes		2. Accepting my portion in life		2. Self-discipline, self-restraint			2. National security							
	3. Authority, the right to lead				3. Capable, competent, effective, efficient			3. Unity with nature				3. Helpful, working for the welfare of others					3. Freedom of action and thought				3. Obedience dutiful meeting obligations			3. Family security, safety for loved ones							
	4. Wealth, material possessions, money							4. Wisdom, a mature understanding of life				4. Responsible, dependable, reliable					4. Creativity, uniqueness, imagination														
								5. A world of beauty, the arts and nature				5. Curious, interested in everything					5. Accepting my portion in life														
								6. Social justice																							
								7. Protecting the environment																							

4.2 Individual case studies

In order to demonstrate how different managers drew on different values in making sense of climate change and business greening, four managers were chosen as illustrative case studies. The managers were chosen because they seemed to reflect contrasting positions

and ideas, and by drawing on a range of different values offered a picture of how the different values played together. Other managers offered similar contrasts and were considered (for example, M25, M26 and M1 and M5) but the competition between M14 and M15 offered additional insights into the role of Power values; M24 was the only manager clearly drawing on Tradition and M10 was particularly eloquent at expressing his ethical position. This section will introduce each manager and give an overview of the values they were drawing on in the interviews before these are explored in more depth in sections 4.3, 4.4 and 4.5.

M10: Lawton. From Lawton's story, it appeared that he was drawing on Universalism, Self-Direction and Security values in making sense of climate change. With regards to business greening, his language suggested that he was motivated by the values of Achievement and Benevolence. He appeared to link climate change and business greening through the Achievement value of influencing others and wanting to make a difference.

Illustrative quotes from Lawton include:

- *Universalism*; "I think the ethical issue is recognition of the link between the way I live my life and the effect that has on the lives of others. Too many people are disengaged from the big issues and I get angry when they say climate change has nothing to do with them. The thought that we could, within a generation, use the world's supply of oil that has taken millions of years to be created, just seems stupid. We are fettering away what other generations can do. It is a profoundly ethical standpoint".
- *Self-Direction*; "I think I have always been an early adopter and I am not shy about talking about my attitude toward things and the way I chose to live my life. Society is always changing and I see myself on the leading edge of that helping to push it in a certain direction".
- *Security*; "Climate change makes me think about the rather frightening changes that will potentially come about, which will affect my children and my children's children, quite

severely I think and its about food production and water supply and the habitability of parts of the world and potentially massive population movements. And it's not going to be very nice".

- *Achievement*; "We are into some very complicated projects, each of which needs a unique solution. This challenges us to continually operate in as sustainable way as possible. As managing director, I am the champion for all the policies we adopt and there is an educational role with that where we not only operate the business in a sustainable way but we're also advocates of sustainability to our clients as well".
- *Benevolence*; "It is the nature of this company that we operate on the basis of consensus and not competition or complication. We are all respectful of each others positions and I don't advocate that anybody does anything that I'm not prepared to do myself. We are an educated, professional group of people and we are aware that this (greening) is the right thing to do".

Lawton is managing director and partner of a landscape architects company. They employ 60 staff and he manages the company on the basis of consensus. They are developing a scheme whereby all staff can become partners in the company to acknowledge that there is 'respect for all positions and all positions are broadly similar'. Lawton's wife (C1) also works at the company and was fundamental in setting up their green team. While Lawton prided himself on being 'an early environmental adopter', he also acknowledged the influence of his wife and her 'mantra' regarding reduce, reuse and recycle. As MD, Lawton described himself as the champion for all the policies they sought to adopt in the company. He explained that it was helpful if he advocated a policy and unhelpful if he did not. He saw himself as important to it all and the environmental agenda as very important to him personally.

M24: Suzanne did not see climate change as being of concern to her. She appeared to be motivated in her business greening by a mix of Tradition and Achievement values linked to

her ideas regarding sustainability. She had not recognised how climate change might link with these ideas.

Suzanne is the managing director of a manufacturing company with 27 employees. She described how she had been an international yacht broker and had come to the company from a completely different background. The company was her father's business and when he died, she stepped in as the family member on the Board. She now runs the company full time. She talked a lot about the importance of sustainability to her father and how his company had a real identity, which she was now responsible for maintaining. The staff looked to him as she did, and his company had been an important part of her childhood. Although times were now financially challenging and she could not have come in at a more difficult juncture, she had won two big contracts and was pleased to be both moving the company forward and doing so in a way that maintained her father's legacy with sustainability and environmental responsibility at its core.

Illustrative quotes from Suzanne include:

- *Achievement*, "Times are tough and I couldn't have come in at a harder time. But in the last 18 months we've won two big contracts for local housing associations which is tremendous. Our biggest plan is to address inefficiencies in waste handling by sorting the materials for recycling in a much more efficient way. One of our challenges is working out how we can be more efficient and environmental correct and where we can cut out any waste".
- *Tradition*, "We won't ever compromise on quality because that is what we have always stood for. The company's got a real identity; it's very reputable with longstanding staff and a real solid ethos. My Father was a very strong character and he truly led by example. He had a strong sense of ethics in the countryside and it mattered to him that our wood was from an ethical source, that it was sustainable. It wasn't done as a sales pitch, it was done

because he felt it was important. He didn't want to be responsible for having made money out of damaging the planet in any way. We follow that path still because that is what we've always set out to be".

M15: Caroline was chosen as an illustrative example because she was the only female manager who appeared to be motivated in her engagement with business greening by Power values. Using the marker values in the SVS, Caroline appeared to draw on Power both in describing her motivations for business greening and in her sensemaking of climate change. She also made sense of climate change by drawing on Security values.

Caroline is the owner and MD of an IT company that employs seven staff. She described how she had made the strategic decision to link her company's policies and approach to the green market after attending a CSR event organised by the Institute of Directors at a time when they were going for Investors in People⁵. She said she was also influenced by her daughter, who had encouraged her to watch 'An Inconvenient Truth' with her. Caroline came from a sales and marketing background and talked about being aware of how some companies could be seen as shallow in their approach to greening. In this respect, she said it was important that she was careful to be seen to be consistent and to 'put her money where her mouth was'. She described how she believed that knowledge was powerful. She had managed to get herself involved with national and international speaking events, such as conferences and seminars, as an expert on green computing and said this had given her a position of authority within the sector which she enjoyed and which she found useful for her business. She said that being involved with non-profit organisations and supporting them meant that it added to her credibility and put her in a good position to offer consultancy to all their potential clients.

⁵ Investors in People is a UK accreditation framework designed to demonstrate and support quality improvements. See www.investorsinpeople.co.uk for information.

Illustrative quotes from Caroline include:

- *Power*; “We achieved Gold Accreditation in the (regional) Carbon Charter recently which shows that we practice what we preach and allows me to go about this in subtle, consultancy-advisory type capacity with the local authority project acting as advocates for us! It’s not a hard sell. It’s easy when people are concerned about rising costs. Knowledge is powerful isn’t it? Obviously it’s good for us. It’s all savings. And we’ve just had our financial year end figures in and our margin’s up nearly 10% from the year before”.
- *Security*; “Because there are so many elements, you know, natural resources, the impact on geography, on weather and actually on people. The world’s resources and landmasses irrevocably changed. That’s going to be a fundamental shift and that obviously has a knock on effect on business that is going to be far reaching. Without wishing to be all doom and gloom, costs are going to spiral; I mean it’s just horrific. If you look at the sheer economics, the logistics in being able to still find resources or alternatives, it’s alarming and who wouldn’t be alarmed and that’s partly in my lifetime but certainly in our children and now my grandchild’s time”.

M14: Robert was critical of others in power, and resentment of his own sense of powerlessness appeared to be a strong theme in his narrative. The beliefs that he expressed would suggest that he framed climate change in terms of Power and Security values. Business greening for him appeared to be motivated by Power and Conformity.

Robert is MD of an IT company that employs 27 staff. His very first statement was that his company was the best employer in the county. He then explained that the award had been given ten years ago and that another award had never been made. While he admitted this was a funny thing for him to say, the comment seemed illustrative of his need to preserve his

public image (a Power value) and this was a recurrent theme throughout the interview. Robert saw himself in direct competition with Caroline's company. He expressed bitterness that they had similar product offerings but that she was better at positioning herself as a green IT expert and used this to increase her sales. However, he then dismissed her approach, firstly arguing that he did not have as much time to network as she did before admitting that he was not very good at networking. The lack of confidence and bitterness that he showed in describing this emphasised the importance of authority to him and how he did not like feeling powerless. He used climate change as a justification for his company being a lifestyle business rather than a 'ruthlessly aggressive corporate', even though an environmental positioning was a new idea to him. He did not feel that he threw his power around but doubted that others in his company would agree.

Illustrative quotes from Robert include:

- *Power*, "I think some of our competitors are struggling and might go under which means we can buy the contracts for our customers so we are reasonably optimistic. Pitching our company as environmental helps to differentiate us and two of our tenants are charities so they quite like all that stuff. One thing we've done is spend a lot of money of the H Vac (heating and ventilating) system. You've got to be seen to provide an energy rating when you sell or lease space and the fact that it was an F rating would reduce the value of it. I'm quite ruthless with my time and I think people might perceive what we are doing as a veneer to win business. The (regional) carbon project may well have had a high profile but it's not been as useful to us in that way".
- *Security*, "Climate change concerns me because at the very least, I think it will make the environment detrimental in my lifetime and certainly for my children's lifetime. Unless something is done about it soon, I don't see how we will be able to protect ourselves from the changes".

- *Conformity*, “We had an environmental policy, something we were obliged to have, because government legislation suggests you need to have one. The H Vac was on its last legs too so we had to replace it. Sustainability hasn’t been mentioned yet but it is perhaps something we should do and I think we should be more sustainable but we’ve subconsciously done as much as we can. I’m feeling really guilty now but the planet’s in enough mess as it is and it’s going to get even worse, so if I can think of anything else we can do, then perhaps I ought to do it”.

4.2.1 Section summary

This section has introduced four of the 31 managers interviewed for this research. It can be seen that each manager has a different story to tell and that they seem to draw on different values to make sense of climate change and business greening. Caroline is the manager in this group who most typifies the win-win message (see section 2.3) promoted by the European Union (EU Communication, 2011) and national governments (e.g. UK DEFRA, 2012) for businesses to save money by saving the planet. She has taken a strategic approach to position her company as green in order to improve competitiveness and reduce costs. The following sections will look in more detail at how managers seemed to draw on the different value types identified in the SVS when describing their understanding of and approach to climate change and business greening. These four managers will be referred to again throughout the chapter to help explore the role of values in managers’ sensemaking.

4.3 Self-enhancing values

Schwartz (1994) describes the two self-enhancing values of Power and Achievement as individualistic and argues that they reflect the extent to which the person looks after their own self-interests. This means that self-enhancing values indicate *“the extent to which one is motivated to promote self-interest, even at the expense of others”* (ibid, p25). The

motivational goal of Power is more closely defined as *“the attainment of social status and prestige, and the control and domination over people and resources”* (ibid, p22). As described in section 3.3.4, I used both the individual level values and the individual level **marker** values to identify when and how a manager was drawing on particular values. With regards to Power, Schwartz identifies four individual level marker values which are:

- Social power and the need to have control over others;
- The need for wealth, material possessions and money;
- Authority, the right to lead and command;
- The need to preserve one's own public image.

Although values are seen by Schwartz as a continuum, with *‘overlap in meaning near the edges of adjacent boundary types’* (ibid, p25 and see Figure 3.3), Achievement values are understood as being different to Power. The primary goal of Achievement is *“personal success through demonstrated competence”* (ibid, p22). The individual level marker values for Achievement are:

- Capable
- Competent
- Effective and efficient
- Ambitious, hard-working and aspiring
- Influential and having an impact on people and events
- Successful and achieving goals

4.3.1 Power values

Caroline (M15) was the only female manager to draw on Power values. This chapter will now return to her story to explore how Power was reflected in the different marker values within her narrative.

Caroline

Positioning her company as a green IT consultancy, Caroline needed to be seen to be doing all she could in order to preserve their public image. By having good policies in place, she had been able to tick all the boxes required for her to receive Gold Accreditation through a county-based green business scheme, which had helped to confirm their positioning as experts in 'green IT'. Caroline felt that this gave her a position of authority and she enjoyed the way that people looked to her as a green IT expert. All of the greening actions they had carried out in their business were financially beneficial. For example, they had introduced a telephone helpline with remote access so that a technician could help customers from the office rather than travel out. Without any reference to measuring potential environmental benefits, Caroline described that this was good for the company because they could deal with problems quickly which improved productivity while also reducing the overheads associated with wear and tear on the vehicle, the cost of fuel and the technician's time. This had helped to increase margins by 10 per cent on the previous year. Following a free environmental audit, Caroline was able to explain that there were potential greening actions over and above the cost saving energy and recycling activities they were already doing but, sadly, there were plausible reasons why these were not cost effective and, therefore, not possible for them to do.

Without wanting to 'sound' mercenary, she said, they had joined another county-based business support scheme in order to access funding to help meet the costs of improving their office lighting. She was sure there would be other benefits as well, which she suggested

might include the opportunity to demonstrate that the company practiced what it preached to a new audience. While Caroline publicly positioned her company as a green IT company, she acknowledged a degree of what she called 'pragmatism': in addition to selling green equipment at a premium, she was happy to sell more 'mainstream' equipment for now if the customer could not afford what they really wanted. Working with schools and overseas charities to ensure the reuse of old IT equipment meant that they could be seen to be doing good and this was promoted as key to who they were as a company. Caroline felt that everybody won through these actions as they were able to dispose of old equipment in an environmentally friendly way that reduced their costs of disposal while helping other people. Caroline wanted to be seen as helpful. She had decided to offer their customers the opportunity to offset the carbon from their newly purchased equipment. She charged an extra £10 for a certificate to say that trees would be planted locally to do this⁶. No one had said no to her. She felt this approach worked very well.

In Caroline's narrative, she drew on the Power values of authority, social power, preservation of public image and the need for wealth and material possessions. Her narrative was consistent and she did not draw on the language of the other self-enhancing value identified by Schwartz: Achievement.

4.3.2 Use of Power values by other managers in the study

It is possible to see the use of Power as a value in the narratives of nine out of twenty male (including Robert) managers, and one out of the eleven female managers (Caroline).

⁶ Caroline did not explain how this was done but her association with a local voluntary sector group who do plant trees for corporate clients, would suggest that she would have the opportunity to arrange this.

Social power and the need to have control over others can be shown through two ideas around business greening expressed by Caroline and Robert. To Caroline, *“knowledge is Powerful”* and for Robert *“it’s not what you know; it’s who you know”*. Although these two ideas at first may seem contradictory, they are both about the manager feeling that they know something or someone that someone else does not know in a way that enables a position of relative power. For example, Robert described how he did not trust organisations that he was working with. However, through someone that he did trust personally, he was linked in with two low carbon advisors and knowledge had been gained that he felt helped him to *“differentiate”* his company. Social power could also be seen in narratives regarding climate change. For example, M17 said that he would not feel badly about someone driving a gas guzzling car unless the exhaust affected him and made his life unpleasant.

The need to preserve one’s own public image could be seen in how M23, for example, talked about doing simple things such as recycling, in order to support the image he was trying to portray. This was in order to carry a green message that would make the company different. Robert was concerned that other people would see his business greening as shallow and as a *“veneer”*, while he simultaneously dismissed the efforts of other companies as *“just PR to win business”* from which he *“recoiled with cynicism”*.

The need for wealth, material possessions and money was illustrated by six managers who talked about how they needed to think about the money because *“at the end of the day, you’re in business to make money”* (M23). This meant that business greening was a *“nice side effect”* (M23) but the motivation was *“saving money”* (M21). The emphasis for these managers was on saving money rather than on making money through new green innovations and opportunities. For example, Caroline explained how she would insulate her premises if a grant could reduce the cost to her and she felt she was *“getting something towards it”*.

4.3.3 Summary of Power values

The ten managers who drew on Power values talked about how business greening could save their company money or improve the competitive position of their company or to improve the way in which others might view them. These motivations fit well with the benefits promoted through the win-win message of voluntary approaches to SMEs to green, whereby they are told they will save money, reduce costs and improve competitiveness (see section 2.3). The examples introduced here illustrate that there are indeed managers who are drawing on Power values in explaining their approach to business greening and – to a lesser extent – to climate change. This, in itself, is perhaps not surprising – after all it is what the dominant government approach to SME greening assumes. However, there are a few interesting points to draw out from this: (1) while some of the interviewees seem to respond in a way that would be understood by the win-win approach, not all of them did so. Indeed, only just under half of the male and only 1 out of 11 female respondents were drawing on Power. This is interesting and suggests that the win-win approach is not applicable to all SME managers; (2) managers seemed to draw more easily on Power values when talking about business greening than when talking about climate change. This may be because climate change is not seen to bring managers any benefit and is therefore not of interest to them. How climate change was understood by managers drawing on Power values will be discussed in depth in chapter 5.

Table 4.2: Summary showing how managers drew on Power values

Social	<i>"I don't consider us a green company but what we try to do is recognise</i>
Power	<i>that a movement is coming, that green will grow, and that we need to be there offering products that fit with that model to be competitive. So we think about what's going to make us different, what will give us an edge and how we can align with products and partners that will carry a green</i>

	<p><i>message and position us where we want to be” (M23).</i></p> <p>Also referenced by C4, M14, M15, M25, M26.</p>
<p>Public Image</p>	<p><i>“The big thing that we’ve done, which I will say was partly environmental and partly technical, was to spend a lot of money on the H Vac (heating and ventilating system) because it was on its last legs so we had to replace it. It cost about £80,000. Now I wouldn’t want people just to see it as a veneer to win business but you’ve got to be seen to provide an energy rating when you lease or sell property and the fact that it was an F rating would have reduced the value of it” (M14).</i></p> <p>Also referenced by C4, M11, M15, M23, M25, M26.</p>
<p>Authority, the right to lead and command</p>	<p><i>“Ever since I completed my apprenticeship, I have been responsible for the things I have done and the decisions I have made. Then this new directing partner tells me we ought to be associated with the green network. Well I was narked because it wasn’t my idea and I thought the whole lot was a shambles and still do. But the ground source heat pump project meant that I was making the decisions again so I took control and led” (M13).</i></p> <p>Also referenced by M15, M17.</p>
<p>Wealth, material possessions and money</p>	<p><i>“I was looking to make savings. You know, our key drivers are always about competitive edge, business advantage and saving money ultimately. In this day and age, saving money is probably the key driver. What we can do to save money” (M21).</i></p> <p>Also referenced by M14, M15, M23, M25, M26.</p>

4.3.3 Achievement values

Lawton (M10) was one of 13 managers to draw on Achievement values. This chapter will now return to his story to explore the impact of Achievement values.

Lawton

Lawton drew on Achievement values in terms of the need to influence others. This was evident in how he talked about both climate change and business greening. The link between the two ideas was seamless for Lawton as he looked to influence others on greening because of his understanding of climate change. Lawton explained that he believed he had an educational role in making a difference, both within and outside the company. For example, he held staff viewings of the films 'The Inconvenient Truth' and 'The Age of Stupid' because he believed staff would benefit from seeing them. He also changed the name and focus of their facilities management group to 'green team' and was pleased that this had met with great interest from staff and helped to motivate them to act. With external clients, Lawton said he acted as an advocate of sustainability because he believed that this was the right approach for them to take. For Lawton, the need to influence others extended beyond how they approached their work to include what work the company was prepared to do and how they worked with clients.

4.3.4 Use of Achievement values by other managers in the study

It is possible to see the use of Achievement as a value in the narratives of eleven out of twenty male (including Lawton) managers, and ten out of the eleven female managers.

Influence and having an impact on people and events was illustrated by managers talking about both climate change and business greening. In both areas, the need to make a difference was described in terms of a motivation for them to act and as a way for them to channel what they did to make it meaningful. For example, in talking about what climate change meant to them, managers described how a *"deep desire to try to make a difference"* (C7) could help to overcome feelings of *"helplessness"* at the enormity of the problems and provide a determination *"not to let the planet go down on my watch"* (C1). With regards to

motivations for business greening, managers drew on the desire to influence others and make a difference to explain what they did. For champions, the opportunity was to engage staff in change as well as “*persuade management*” (C5). For managers, there were opportunities to make a difference by both engaging staff and by influencing other businesses through words and example. For example, M5 described how she “*communicated closely*” with other local businesses to encourage them to follow her example in using local suppliers. Managers used positive and empowering emotional words to describe their influencing roles, such as feeling proud, passionate, involved and happy.

The need to be seen as capable, competent, efficient and effective was the other most clearly illustrated marker value for Achievement. This was shown in two ways: firstly, where managers valued competency and efficiency they could be frustrated and disappointed by seeing perceived inefficiency in others; especially in government policies towards green business. Secondly, managers talked about working in “*continuous steps*” (M1) to improve and develop better products that were more sustainable for the future and to overcome technical challenges in doing so. The environment could be seen as a “*component*” (M7) of quality and of management where managers could take “*pride*” (M11) in overcoming inefficiencies by exploring challenges and becoming “*quicker, better, more efficient*” (M7). The ability to see climate change in terms of components that needed to be addressed could be empowering, and enable managers to deal with a range of current and future issues.

The need to be successful and achieving goals was a marker value illustrated by managers talking about business greening and in particular through pride in achieving the goals set in an environmental action plan (C3, C5). For example, for C5 an environmental action plan empowered her to focus on achieving a set of goals by working on individual attainable actions. In the first year, she was able to reduce the company’s electricity use by

30% and she was “*astonished*” at what she had achieved through “*boring little incremental measures*”.

Social recognition, respect and approval of others is a marker value that does not appear in later versions of the SVS, but it was included in earlier versions and was identified by Rokeach (RVS 36; See Ralston et al., 2011, p5). However, while Achievement, like Power, is defined by Schwartz as self-enhancing; for Achievement, there is an acknowledgement that the views of others may be important as the *demonstration* of competence is *evaluated* by the system or organisation in which the individual is located (Ralston et al., 2011, p19). It is beyond the scope of this research to comment on whether ‘recognition’ should be included as a separate marker value or across Achievement more broadly, but in terms of understanding the motivation of individuals to engage with business greening, it is worth noting that two managers demonstrated that recognition was an important part of their feeling a sense of achievement. For example, for C3 motivation to engage with greening included a sense that she had done something for the environment along with the sense of approval that she received from her manager. She saw that the environment was important to him and she valued both his support and his feedback to her. In a similar way, C5 demonstrates this need by her reaction when it was not given. While C3 was motivated and empowered, C5 found she felt disempowered, disappointed and hurt. Indeed, she expressed her own surprise at how, as a mature professional woman, she had been so hurt by a lack of recognition for her environmental achievements and efforts within the business. She felt that she had been personally very committed to ‘the green project’ but now wondered why she had bothered. She said: “*I really stuck my neck out, I really went for this and put a lot of effort in and I know it sounds petty but sticking those certificates down the corridor out of sight that hit me and I just thought, well, to hell with it*”.

The marker value for ambition and aspiration was not reflected in the way managers described their motivations for business greening or what climate change meant to them.

4.3.6 Summary of Achievement values

There were eleven male and ten female managers who drew on Achievement values. These managers drew on Achievement mainly in terms of influencing others to make a difference and in being capable, competent, efficient and effective. In addition to managers drawing on these two aspects of Achievement as a motivation for business greening, a number also understood the way they acted on climate change in these terms. In this way, managers talked positively about feelings of empowerment and believing they could make a difference by influencing other people. In addition, managers used the language of efficiency to talk about dealing with the 'components' of both climate change and business greening. Business greening could be managed efficiently through continuous improvement and by using a step-like approach to make the components of greening manageable. In a similar way, climate change could be reduced from a large problem to one in which components could be addressed in a more manageable way. This seemed to both empower managers to act and to help them overcome feelings of disempowerment that otherwise came from seeing climate change as a big and serious problem.

Managers also satisfied the need to be successful and meet goals through business greening and in particular through the use of action plans and formal environmental management systems. No one talked about the need to be ambitious, hard-working or aspiring. However, it was clear that for two managers, both environmental champions, recognition of their capability and achievements from their line managers was important in motivating their actions.

Table 4.3: Summary showing how managers drew on Achievement values

Influential, having an impact	<p><i>"I think it's important to show people that we all need to do our bit to reduce climate change and so I like to set an example of being a lady on a bike, you know, in business clothes and high heels because I think it's important to say to the world, this is acceptable and it's about leading the way and saying to people, hey we're doing this how about you" (M19).</i></p> <p><i>"I am just now writing a paper for the company on how we can better try and influence our clients. We do our best to advise them and take them on a journey of greenness and we do it because we can. We've also been able to use the green task team to move things up the business agenda" (C1).</i></p> <p>Also referred to by C1, C3, C5, C7, M5, M6, M7, M8, M10, M19, M20, M22.</p>
Successful, achieving goals	<p><i>"And the main thing was I had an action plan, so we had a set of goals and we could choose what we did first and what we thought was attainable and basically just work our way through. In the first year, we cut our electricity use by 30% which was astonishing and we had done that from boring little incremental measures like telling people to switch off when they went home" (C5).</i></p> <p>Also referred to by C3, M1, M6, M18, M24.</p>
Capable, competent,	<p><i>"Yes there are technological challenges but people, each individually, if they put their minds to it, every time they're building something new,</i></p>

<p>effective,</p> <p>efficient</p>	<p><i>they're thinking about it, every engineer, every builder is thinking how can we make this more efficiently, how can I make this better..." (M22).</i></p> <p><i>"So our main focus really has been on just making sure that we are an efficient producer and user of manpower and resources. Developing a 5% renewable content leads us into a future where we can have a higher renewable content but it's a good thing to do it in steps, progressive, continuous steps which is more sustainable in the long run" (M1).</i></p> <p>Also referred to by C2, C3, C6, M1, M7, M8, M9, M10, M12, M16, M20, M22, M24.</p>
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4.4 Self-transcending values

Self-transcendence values *"indicate the extent to which one is motivated to promote the welfare of others (both close friends and distant acquaintances) and nature"* (Ralston et al., 2011, p20; and see Schwartz, 1994, p25). There are two self-enhancing values. Universalism relates to the goal of *"understanding, appreciation, tolerance, and protection of the welfare for all people and for nature"* (Ralston et al., 2011, p19). This can be compared with Benevolence, where concern is for a closer group of others and with a narrower focus on the *"preservation and enhancement of the welfare of people with whom one is in frequent contact"* (ibid, p19).

4.4.1 Universalism

Schwartz identifies eight marker values for Universalism (Ibid, p19). These are:

- A world at peace, free of war and conflict
- Equality

- Unity with nature
- Wisdom, a mature understanding of life
- A World of beauty, of nature and the arts
- Social justice, correcting injustice, care for the weak
- Broadminded, tolerant of different ideas and beliefs
- Protecting the environment.

Lawton (M10) was one of 13 managers to draw on Universalism values. This chapter will now return to his story to explore the impact of Universalism.

Lawton

Lawton seemed to draw on 'a mature understanding of life' to highlight the importance to him of climate change as a '*profoundly emotional and ethical issue*'. He felt concern at how climate change would potentially touch every aspect of life on Earth in an interconnected way. He felt angry at how the current generation were wasting resources and carrying on business as usual. He felt it was ethically wrong for so many people to be disengaged from the big issues and not feel any connection between the way they lived their lives and the effect that was likely to have on others. He described himself as being very aware of the potential changes that climate change might bring and how those changes were going to affect the planet as a whole. Lawton drew on social justice to describe how wrong he believed it to be that people in other parts of the world, who had least contributed to the problem, would be affected first and hardest by climate change. He also described a need to protect the environment so that both other people and other creatures might thrive. He was concerned about protecting the environment both as a resource for human use and in order to preserve habitats and biodiversity for the sake of other life-forms.

He said about climate change: *“It’s an ethical issue because too many people are still disengaged from the big issues, and don’t feel any connection between the way that they live their lives and the effect that it’s likely to have on others, so it’s a profoundly ethical standpoint. It’s an emotional issue and I feel quite angry sometimes at the way that I see people behaving, particularly those who say, well even if the climate is changing it’s nothing to do with me, or there’s nothing I can do about it so I’ll just carry on living my life the same way as I always have done. So, the precautionary principle comes into play, you don’t do anything now which actually fetters what it is that future generations can do. It’s acknowledging that your personal actions have the potential to have a significant effect on the lives of others”.*

4.4.2 Use of Universalism by other managers in the study

The need for a world at peace, free of war and conflict was illustrated by managers who believed that climate change would increase stress on the land for resources, such as water and food, and that those stresses would be greatest in the countries most vulnerable to climate change. The consequences of this were seen as dire for everyone and respondents expressed fear about the reactions of governments to mass migration as large parts of the world become uninhabitable.

The need for equality was expressed through not wasting resources that other people could use, living within sustainable limits and contributing towards the general good of society. Government needed to make a more *‘level playing field’* (C1) so that everyone, regardless of wealth or social status could be part of the solution.

The need to be part of nature was described by managers as understanding the natural world as a complex, closed system, with C1 in particular referring to the ideas of James

Lovelock's Gaia theory⁷. Managers described how human beings were part of the planet and that human actions were pushing the boundaries of the planet's natural systems beyond a point from which they could recover. Feeling connected to nature was important and frustration and despair were expressed at the thought that climate change was linked with destruction of the planet. Destruction was attributed to consumerism, greed, short-sightedness and people only thinking about themselves.

Wisdom, a mature understanding of life could be seen in managers' descriptions of being motivated by seeing the bigger picture and recognising the cumulative effect of small actions. This meant that managers could see connections between issues; people, environment and quality and were most satisfied when all aspects fitted together. Economic models that focused on one aspect of the whole were '*awful*' (C5) and managers specifically associated a number of marker values for Power with such economic models, including the continuous pursuit of economic growth, profit, competition and social status.

A need for social justice was drawn on to describe how climate change was seen as morally wrong, unfair and unjust because it was linked with the greed of a few leading to suffering by those who had no voice and no rights. This also meant that climate change was an emotional issue with managers expressing passion as well as anger at the lack of responsibility of those who felt that climate change had nothing to do with them. Justice and responsibility were powerful ideas that managers felt strongly about. However, justice and seeing the bigger picture could also make choices difficult with managers seeing how potentially simply solutions might cause problems elsewhere. As C1 explained, the economic

⁷See http://www.ecolo.org/lovelock/what_is_Gaia.html. The ability to see the Earth from space for the first time stimulated James Lovelock to envisage the Earth as one interconnected whole; with all planetary systems acting in harmony.

growth of India and China was contributing to climate change but at the same time, was taking millions out of poverty: *"So the whole thing is just socially, environmentally, ethically, the whole thing, it's holistic isn't it, I can't differentiate"* (C1). It was also felt that while competition was a natural human instinct, that there was a point where *'it loses the plot'* (M5). Sustainable communities, where money stayed locally and where there was a greater responsibility for environmental custody and guardianship (M9), were seen to be happier, fairer and more sustainable (M5 and C7).

Protect the environment and preserve nature was drawn on by seven managers who overtly explained that they felt a need to protect the environment from harm. They felt close to nature and identified with specific places that were at risk as well as places from their childhood that they had seen changed. Climate change had become part of what they now saw as a threat to nature and motivated them to act.

4.4.3 Summary of Universalism

Thirteen managers, eight male and five female, drew on Universalism in how they talked about climate change and business greening. Each of these managers also drew on the self-enhancing value of Achievement but none drew on Power. Managers spoke with passion about how climate change was a moral issue for them. By seeing the consequences of small actions connected to bigger issues, managers described how they understood that climate change was wrong because it was a consequence of Western greed and waste and how people elsewhere, who were poor and vulnerable, would suffer. This compassion and concern for other people was extended to consider environments and ecosystems as morally significant, regardless of whether managers had direct experience of those environments. Managers described feeling a connection that could be both spiritual and/or of personal intrinsic value and related this to their own sense of conscience. In particular, this meant that climate change could be seen as an ethical concern and that business greening was an

extension of their own sense of morality. Not only was wastefulness and destruction of the environment seen as wrong in itself, it was important to managers that they considered the environment in all aspects of their business decision-making in order to do least harm. It should be noted that managers drew on a range of Universalism values, which suggests that their concern was not overtly ‘green’ but was as much a social as an environmental concern. Indeed, the interconnectedness of ideas meant that it was impossible not to see issues as holistic and this could make deciding on the best course of action problematic. Only six out of the 31 managers in the study drew explicitly on the need to protect the environment as a motivation and only five did so in terms of business greening.

Table 4.4 Summary showing how managers drew on Universalism to describe climate change and business greening

Equality	<i>“Being someone who believes in the equitable distribution of resources and opportunities and just whether there’s a spirit level, why equality is better for everyone, not wasting things, not living beyond your means and just generally adding to the good things that happen, it’s clear to me the government needs to ensure that everyone, regardless of wealth or social status can be part of the solution to climate change” (M7).</i> Also referred to by C1, M9.
A world at peace, free of conflict	<i>“I think it will only be once there is such a huge shortage of things that governments might start doing things but I think you’ve also got the potential for far more conflict, that’s the greatest stress on the land. It will be those in the more susceptible regions of the world, where you’re going to see migration and persecution and I think the</i>

	<p><i>consequences are going to be quite dire unless we are going to take some real action" (C7).</i></p> <p>Also referred to by C5, M23.</p>
Unity with nature	<p><i>"I love nature and I love the natural world, I love gardening. I think it's translated in me as being a bit tight, frugal with resources and that is translated onto being very interested in cutting carbon and I'm just horrified at what humans will do to consume, despite the consequences of climate change and biodiversity loss, and naturally inside me it makes me want to cower. Not being religious doesn't mean you don't have spiritual feelings or a feeling of connection and I think for me, most definitely, nature fulfils that and gives me a good grounding" (C5).</i></p> <p>Also referred to by C1, C7, M5, M6, M9, M10, M12.</p>
Wisdom, a mature understanding of life	<p><i>"Tesco's used to mark products down at the end of the day but now they throw them away because they found that some customers were waiting for them to be cheaper. That's a waste of the whole cooking process, the food itself, the packaging, the energy, materials, transport everything and there are people who could eat that. So for them to say they are not going to give you a plastic bag because they want to save the environment is rubbish when they're throwing away a whole bakery at the end of each day" (M9).</i></p> <p>Also referred to by C1, C3, C5, C7, M5, M6, M10, M12.</p>
Social justice	<p><i>"The more greedy we are for resources, the more disadvantaged the poor get, so it's probably the bigger picture of the effect on the</i></p>

	<p><i>poor, the poor of the world really, which is probably the more moral way to look at it. Undoubtedly there's people who are living on the edge who will be pushed off the edge by climate change and by the greed of the developed countries, and the wrath of the developing countries, so I think it's a moral question" (M1).</i></p> <p>Also referred to by C1, C3, C5, C7, M5, M8, M9, M10, M12, M16.</p>
Protecting the environment	<p><i>"I have a fundamental something that's driving me I suppose, and climate change, well it ticks my box in this way: I think, it's just a beautiful place to be and we are wrecking it. We've been given a chance and, now we know so much, and yet we're about to tip it over, and it all just seems wrong. It's the feeling that I've got to do what I can: that this planet's not going down on my watch without me doing anything" (C1).</i></p> <p>Also referred to by C3, M1, M7, M10, M12, M16.</p>

4.4.4 Benevolence Values

The motivational goal of Benevolence is concerned with the *"preservation and enhancement of the welfare of people with whom one is in frequent contact"* (Ralston et al., 2011, p19). The concern is defined more narrowly than Universalism with marker values identified by Schwartz (1994, p25) as follows:

- Loyal, faithful to my friends, group
- Honest, genuine, sincere
- Helpful, working for the welfare of others

- Responsible, dependable, reliable
- Forgiving, willing to pardon others.

4.4.5 Use of Benevolence by other managers in the study

Suzanne, Caroline and Lawton each demonstrated Benevolence values in their narratives. Unlike the passion and frustration expressed by Lawton regarding Universalism, Benevolence was expressed more gently; with pleasure and satisfaction described from working together and caring for others. Benevolence needs could be articulated in relation to climate change and/or business greening.

Loyal, faithful to my friends, group was used to describe the pleasure managers received from knowing they were helping local communities and environments through their business greening. Here, concern often began with their staff and was expressed in terms of ensuring that they had a clean, safe working environment and that the business was environmentally efficient and jobs were protected. Concern extended to local communities, especially where managers lived within the community. However, in this respect climate change was *not* necessarily seen to be part of day-to-day lives. It was argued that it was human nature to be concerned by what affects you and your group and that climate change could be seen as something outside of the circle of concern; it was not close enough to home to affect the people that mattered.

Honest, genuine, sincere was shown by managers who needed a consistent fit between who they were and what they did and who they worked with and what they believed. Trust was a '*massive issue*' (M12) and where managers perceived any sense of inconsistency or hypocrisy, ideas regarding environmental actions were ignored. People were important and needed to be genuine, personally credible and consistent. Managers judged both themselves

and others by this value. Where sincerity was a key motivating value, they were unhappy with inconsistency. For example, M12 explained how he could not have faith in the government's message on climate change where their actions and policies contradicted what they said.

Helpful, working for the welfare of others meant that managers felt good about helping others. For example, M11 enjoyed providing peer support to other businesses and four managers described their pleasure from helping children and other individuals engage with activities such as offsetting carbon by planting trees so that *'children have a sense of ownership and nurture them and enjoy them with their family'* (C2). Managers described receiving pleasure from the feeling that they were helping others to experience and benefit from a better environment. Managers were interested in environmental issues where they provided an opportunity to engage with the groups they cared about or that were close to them.

Responsible, dependable, reliable meant that managers felt a responsibility towards both the financial, environmental and social sustainability of their businesses so that everybody in the organisation benefitted. Ideas regarding responsibility also included thinking about the future and in this way included climate change. Managers could link the present to the future through their children (C3, M18) or grandchildren (M20). It was important to these managers that their children understood that they had tried their best not to cause them harm. They wanted to do what they could to help minimise climate change but often felt a tension from more immediate demands on them from day to day responsibilities.

4.4.6 Summary of Benevolence values

Eighteen managers demonstrated Benevolence values; twelve also drew on the self-enhancing value of Achievement and six on Power. Their narratives showed how their

concern for the people close to them could feed into their motivations for business greening or their understanding of climate change. Improving the sustainability of their business through environmental actions could be a way for managers to demonstrate their concern to staff and local communities. However, this local focus could mean that climate change was seen as outside of their day-to-day activities and responsibilities. Managers motivated by honesty and sincerity talked about both business greening and climate change where those values were breached. They despised the insincerity of perceived environmental profiteering and messages about climate change were undermined by distrust in the messenger. Consistency between words and actions was seen as important, along with the need to take personal responsibility for their own actions.

Table 4.5 Summary showing how managers drew on Benevolence values to describe climate change and business greening

Loyal, faithful to my friends, group	<i>"It's so enjoyable to know your producers, know their product, and when you get to know them as people, you've got a community but also you know that what you're doing is not causing, well you're minimising the damage to the environment by reducing food miles and congestion and travel" (M5).</i> Also referred to by C1, C2, M6, M10, M18, M19 M21, M23.
Honest, genuine, sincere	<i>"It means my business approach to sustainability and the environment is very strongly a part of my own approach to things; the way that I live my own life so you have to walk the walk if one is talking the talk. So I don't advocate that anyone does anything that I'm not prepared to do myself" (M10).</i> Also referred to by C1, C2, M5, M9, M11, M12.

<p>Helpful, working for the welfare of others</p>	<p><i>"I have staff here who take their children to the supermarket for a day out. Isn't that sad? It enhances consumerism to buy more junk and they're going to end up with mental health issues, completely disconnected from nature and creating all sorts of problems for themselves. We had a bbq for them and they had a wonderful time, doing something that involved them with each other, was interactive, and was totally environmentally sound. These sorts of things help people to realise there is more to life" (M19).</i></p> <p>Also referred to by C2, C3, M5, M10, M11, M15.</p>
<p>Responsible, dependable, reliable</p>	<p><i>"When you're running a small business, you've got to hand it on to someone and ideally it would be in a better position when I do. There is very much a driver of sustainability in how the business is run. The business has to sustain, perhaps 60 staff, and it's important that it continues to do that" (M20).</i></p> <p>Also referred to by C3, M6, M11, M12, M18, M20, M23.</p>

4.5 Other values of interest

Four other values were drawn on by managers in ways that are of particular interest to this research. These values are summarised from Ralston et al. (2011; and see Appendix 3) as follows:

- Self-direction is a value about openness to change and is described as the goal of curiosity, creativity and independent thought and action. Self-direction comes from the need for autonomy and independence.

- Tradition values are concerned with respect, commitment and acceptance of the customs and ideas that one's culture imposes on the individual. Tradition can be a symbol of a group's cohesion and an expression of its uniqueness.
- Conformity values are concerned with the restraint of action, inclinations and impulses that may be likely to upset or harm others or that violate social norms.
- Security reflects motivations driven by concerns for the safety, harmony and stability of society; the safety and security of loved ones and of the self.

Tradition, Conformity and Security are directly opposed to Self-direction (see Schwartz Circumflex Model, Figure 3.4) and are all associated with conservation values and preservation of the status quo.

4.5.1 Self-direction

The chapter will return to the case study of Lawton to illustrate how Self-Direction could be seen in this study.

Lawton

Lawton drew on the need for Self-Direction in how he talked about his approach to business greening. He was proud to be seen as an early adopter of sustainability both at home and at work. He felt that he did make some sacrifices with this; for example, restricting foreign travel to avoid the environmental impact of flying but he saw these sacrifices as part of making the life he had chosen happen. In addition to expressing this need for freedom of action and thoughts, Lawton also demonstrated a need for creativity, uniqueness and imagination. He described how the company was involved in complicated projects that each required a unique solution. This meant that the ideas of change and innovation were not new to him and he

linked this openness to change with his need to influence others to explain how the company was helping to push the boundaries of society in the 'right' direction.

Use of Self-direction by other managers in the study

Nine managers made some reference to the marker values associated with Self-Direction. It was clear that managers motivated in this way did not like being told what to do. This was true of both business greening and climate change. Where managers did feel they were being told what to do, they rejected the message. However, where managers felt they were showing **independence** and **setting their own goals** and being **creative** and discovering issues for themselves, they could be motivated to engage with both areas. For example, M9 emphasised the importance of choosing and knowing his own personal plan; how his beliefs were expressed through that, and the importance of being personally committed.

The need for freedom of action and thought meant that managers would pursue what they believed to be right regardless of what others told them. However, M11 and M17 illustrated a reverse position: both resented being told what to do or think with regards to climate change. For M17, the idea that he should believe a particular narrative about the causes and consequences of climate change was rejected with some anger. M11 channelled this need to hold onto his own thinking in his role of financial director to act as 'devil's advocate'. He explained that it would be 'heretical' for him to openly question the role of carbon in climate change but that he could quietly use his role to challenge and force others to question what they did in the business.

Table 4.6 Summary of how managers drew on Self-direction to describe climate change and business greening

<p>Independent, self-reliant, self-sufficient</p>	<p><i>“Don’t drive your car there, you should cycle. Well how many lorries have got to deliver enough food that I can eat enough calories that I can cycle there? People should leave folk alone and let them make their own minds up” (M17).</i></p> <p>Also referred to by M10.</p>
<p>Choosing, own goals, selecting own purposes</p>	<p><i>“As an investor, I’ve been involved in solar technology since the mid 90’s, because I completely see that you can’t keep doing what you’re going to do” (M11).</i></p> <p>Also referred to by C3, C7, M22.</p>
<p>Freedom of action and thought</p>	<p><i>“I was interested in the environment before hearing about climate change. I was a bit of a strange person at school. I was called an activist because I ran around with petitions to save our animals, animals which were on the street, in terrible conditions. So I got involved with animals first and then somehow shifted to the environment” (C3).</i></p> <p>Also referred to by M11, M17.</p>
<p>Creativity, uniqueness, imagination</p>	<p><i>“We’re into some very complicated projects, each of which needs a unique solution, so the idea of change and innovation is not new to us... We see ourselves as very much on the leading edge of that” (M10).</i></p> <p>Also referred to by C3, M9.</p>

Curious, interested in everything	<i>"We tried everywhere to get the hydrogen-fuel cells and I became fascinated by the whole idea and learned a lot of new things. In terms of the climate and global warming, I learned that even doing small things you can achieve quite a difference, it just needs a little bit of time, a bit of creativity and curiosity, just to see what you can do, and, yes I think it changed me as a person as well" (M7).</i> Also referred to by C3, C7, M11.
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4.5.2 Tradition

The chapter will return to the case study of Suzanne to illustrate how Tradition could be seen in this study.

Suzanne

Suzanne was the only manager motivated by Tradition, but it seemed so significant in how she addressed business greening that her ideas are discussed here. In describing her motivations for business greening, Suzanne drew on a need to respect Tradition and preserve time honoured customs. She also briefly referred to the need to submit to life's circumstances. Suzanne had inherited her father's company on his sudden death four years prior to the interview. She came to this from a very different international business background, but accepted that this was the role she needed to take. Sustainability had been very important to her father and was an important part of what the company was known for. She could see that it was important to maintain and build on this tradition for a number of reasons, but a key part of that was out of respect for her father. She had grown up with the company, it was part of her life and keeping the company alive as her father would have wanted was important for her. Respecting her father's tradition and looking to preserve his

philosophy and approach to sustainability, motivated Suzanne to think long term about business greening. In particular, she wanted to maintain his ethos towards quality and sustainability and looked to act in ways that he would approve of. This meant, for example, that she explored how they could use land for replanting trees as well as maintaining a complete chain of custody on all the sustainable wood products they used. She said:

“My father was a very strong character and he truly led by example. He engendered loyalty and embodied authority, he was strong. He was a true country man and it meant a lot to him that he wouldn’t be damaging the world. It mattered to him that our materials came from a sustainable, ethical source. He didn’t want to be responsible for making money out of damaging the planet...we won’t compromise on that quality because quality is what we’ve always stood for”.

4.5.3 Conformity

The chapter will return to the case study of Robert to illustrate how Conformity could be seen in this study.

Robert

In addition to drawing on Power values (see section 4.2), Robert also illustrated the importance of Conformity values in his motivations for business greening. Robert engaged with greening actions at work when he felt they ‘had to’. For example, they had an environmental policy and action plan only because he had felt ‘obliged to’ and needed to have them in order to meet the requirements of a project they were involved with. They were also involved with carbon offsetting through a local tree-planting project and Robert explained that they had 16 trees planted ‘somewhere almost out of guilt’ because the project leader was a friend of his. He also described feeling guilty during the interview for not doing more,

blaming himself and his ‘shocking time management’ and arguing that the environment was important but not urgent.

Use of Conformity by other managers in the study

In talking about climate change, M21 showed that **courtesy** was important for him. Although he didn’t feel particularly engaged with climate change, he did not want to be careless by harming others and respected those who were committed to ‘saving the world’. M19 demonstrated the importance to her of **restraint and self-discipline**. She thought it was wrong that people thought it was their right to have whatever they wanted and felt that more needed to be done to ‘get people’ to reduce their energy use. M23 was partly motivated by the need to be **dutiful and obedient**. He wanted to see clearer directives from government to make it more obvious to him what he should and should not be doing.

The need for obedience, being dutiful, meeting obligations was the Conformity marker value drawn on most and this was how managers talked about their motivations for business greening. Here managers described how they invested in greening when they needed to in order to meet supply chain or legal ‘requirements’. They talked about changing the way they operated when they ‘had to’ (M20) and going down an accreditation route when it was ‘inevitable they had to’ M24.

Table 4.7 Summary of how managers drew on Conformity values to describe climate change and business greening

Politeness, courtesy, good manners	<i>“For me personally I wouldn’t want to be careless. If there are things that I can do that don’t cause me too much trouble, that will be a benefit to society, then I will do them. You don’t want to come away thinking you’ve been irresponsible or made matters worse” (M21).</i>
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Self-discipline, self-restraint, resistance to temptation	<i>"I despair sometimes when government's looking at options for electricity production - why don't we actually reduce the amount of electricity we're using? People do not have a right to live beyond their means when it affects everyone else" (M19).</i>
Obedience, dutiful, meeting obligations	<i>"ISO 14001 isn't a requirement for us yet. If our customer says to us, we want you to do this, then if we can do it we will but there needs to be a business driver to make us want to go in that direction. A business driver or a legal requirement. If there's a legal requirement for us to do it, we'll do it as well" (M21).</i> Also referred to by M16, M20, M23, M24.

4.5.4 Security

The case studies of Lawton and Caroline are used to help illustrate how Security values were drawn on by managers in this study.

Lawton

Through the filter of Security values, Lawton explained that while the UK would be largely protected from the worst effects, it would not be possible for the country to shelter from the effects that climate change would have on other parts of the world. He was very concerned by these effects and believed that all the comforts and security that his generation had enjoyed, including food, healthcare, clean water, energy, freedom from conflict, and education were threatened by the effects of climate change.

Caroline

Climate change was an issue of Security because it was seen as a threat to her ability to get supplies through to her business and threatened the future for her business and her family.

Use of Security by other managers in the study

Eleven managers drew on Security values in how they talked about climate change. There was no reference to these values with regard to business greening. Climate change was seen as a threat to **stability and order in society**. For example, M1 was concerned about energy supplies and coastal flooding and felt that a 'Day After Tomorrow scenario' was possible as the effects of climate change became more pronounced. Climate change could also threaten **national security** and this meant that the UK should act unilaterally as '*we're not in some utopia where everyone works together*' (M11). UK dependency on competitors for energy also made M11 feel threatened. The perception that oil might no longer be available was seen to undermine both these first two security needs.

Most of the managers drawing on Security, expressed their concerns in terms of fears about **family security and safety**. The future was described as 'frightening' (M10), 'horrific' (M15) and 'dreadful' (M19) and of 'personal concern' (M20). Managers did not believe that their children and certainly their grandchildren would be able to experience the same quality of life that the current generation had experienced. They were concerned that how global changes in climate would affect food production, the habitability of large areas of the world, water supply, and population movements and that changes would be exponential and unstoppable.

Table 4.8 Summary of how managers drew on Security values to describe climate change and business greening

<p>Social order, stability of society</p>	<p><i>“There’s no grasp of the peak oil thing. People are going on about petrol prices going up, there’s not much left! It’s going to get more expensive! And that’s got a bigger impact on us in terms of society because, you know, all the prices are going to go up and the resources are going to go down, and the population’s still growing, so those are the things that are really sort of causing the pressure” (M5).</i></p> <p>Also referred to by M1, M15, M19.</p>
<p>National security, protection of my nation from enemies</p>	<p><i>“Oil is running out. We have to plan our way out of being oil dependent. We have to plan our way out of being dependent on energy from other nation states that aren’t stable. We have to reduce our dependency on people, let’s face it, competitors” (M11).</i></p> <p>Also referred to by M10, M15, M19.</p>
<p>Family security, safety for loved ones</p>	<p><i>“So that links directly to climate change because I’m worried about my kids, you know, I don’t want my kids to live in a world where we’ve got millions of refugees coming because they’ve got no water, and they’re fighting for resources, and they’re living in a climate that’s proving even more difficult and there isn’t enough food. I don’t want my children and grandchildren dealing with those sorts of issues, so I do feel very strongly that is related to climate change” (C5).</i></p> <p>Also referred to by M10, M11, M15, M16, M19, M20.</p>

4.6 Chapter summary

This chapter has explored the type and nature of the values that managers were drawing on by identifying the individual marker values revealed in their interview narratives. It was shown that managers drew on a number of different individual level values at any one time, supporting the idea that although values are relatively stable and deeply held, they are also dynamic and prioritised within individuals (e.g. Schwartz, 1996).

In terms of climate change and business greening, all managers drew on one of the two self-enhancing values but it was either Power or Achievement, never both. Caroline was the manager that this chapter introduced in depth who most typified the win-win message for businesses to save money by saving the planet. She had taken a strategic approach to position her company as green in order to improve competitiveness and reduce costs. Of the thirty-one managers in this study, nine out of twenty male and one out of ten female managers demonstrated that they were motivated by Power and drew on the eco-efficiency (Dyllick and Hockerts, 2002, p136) language reflected in the win-win message regarding motivations to save money and improve competitiveness through business greening. This highlights how the win-win message is not value-free but is linked to Power-based motivations to engage with environmental issues. The twenty-one managers drawing on Achievement values were more engaged with both climate change and business greening and were excited at opportunities to make a difference by influencing others and to demonstrate their effectiveness and efficiency. Drawing on the language of efficiency, managers suggested that climate change could be broken into components that they could deal with.

The self-transcending values of Universalism and Benevolence were also important in understanding managers' motivations and sensemaking. Here, managers were able to draw on a number of values to demonstrate their motivations for business greening and showed

that climate change could be closely associated with those motivations. Interestingly, although the need to protect the environment was important for six managers, it was clear that managers were not overtly green but instead were motivated by a mix of social and environmental concerns.

Finally, this chapter looked at how four other values were drawn on by managers. In particular, Security was a value that managers drew on while talking about their understanding of climate change while the Conformity value of obedience was drawn on by managers who engaged with business greening when it was required of them. Managers motivated by Self-Direction needed to set their own goals and enjoyed learning about climate change and finding creative solutions.

Chapter 5: Understanding climate change

5.1 Introduction

Building from the analysis presented in chapter 4, where I examined the type and nature of the different values that managers drew upon, this chapter explores the in-depth meaning of climate change from the perspective of the managers in this study. The different ways in which managers framed climate change will be explored through recognising and acknowledging the values they were drawing on to filter information and frame their ideas. The goal of the chapter is to understand why managers within SMEs may differ in their approach to climate change. In doing so, this chapter directly address three points: firstly, how do SME managers make sense of climate change. Secondly, how managers understand climate change as a business issue. Thirdly, which values do managers draw upon in how they make sense of climate change.

In section 5.2, I will provide an overview of what managers said climate change meant to them before returning to the four individual case studies of Robert, Caroline, Suzanne and Lawton to see how different ideas are reflected within different individuals. The remainder of this section will explore in-depth the different ways in which managers framed climate change. Section 5.3 explores those whom managers said helped them to shape their understanding of climate change within a social context. Section 5.4 provides a chapter summary.

5.2 Understanding climate change

5.2.1 Overview

When asked: 'what does climate change mean to you?' managers responded with a number of different concepts with each, individually, drawing on more than one idea. From the data, I brought these ideas together into five main themes, which can be expressed under the following statements:

- Climate change is about what can be experienced locally, notably changing weather and seeing places at risk;
- Climate change is to do with energy;
- Climate change is to do with our use of natural resources;
- The cause and effects of climate change are unclear;
- Climate change as an idea is seen to be undermined by confusion, vested interests, profiteering and inconsistency.

Within these five broad ways of thinking about climate change, managers described complex and often contested ideas. This section will build on the understanding of values introduced in section 2.4.4; the role of values in environmental issues (2.4.5) and the use of the Schwartz Value System in environmental research (2.4.5); along with how I used the SVS system in my data analysis (3.3.4) to explore the themes that I identified in the data to discuss how managers made sense of climate change. It is worth remembering that by both filtering the information that individuals hear and helping to frame how individuals make sense of this, values are a precursor of sensemaking (Aadland, 2010, p468). Sensemaking can only start when individuals realise that a situation needs attention (Thiel et al., 2012, p51) and this often

begins with an emotional reaction that then requires focus and energy to address (Maitlis et al., 2013, p6). Weick et al. (2005, p410) argue that sensemaking in organisations is about what events mean to the individuals taking part. Therefore, exploring how managers make sense of climate change starts with how they described climate change and what they said it meant to them. This will draw on the idea of 'framing' (Taylor, 2000, p511) as a way of bringing ideas, meanings and beliefs together to illustrate different ways of thinking. Framing is consistent with sensemaking in that sensemaking helps individuals to develop their own set of ideas which also helps them to create a sense of certainty (Angus-Leppan et al., 2010 p191; Weick, 1995, p14). As described in section 2.5.2, Hulme (2009) suggests four ways in which climate change is framed by lay audiences. My findings partially reflect Hulme's ideas and I will highlight similarities and differences throughout section 5.2.

Table 5.1 below, provides a brief overview of what managers talked about when asked what climate change meant to them. The Table is ordered to highlight the difference between Achievement and Power for two reasons; (1) as shown in Table 4.1, managers drew on either Power or Achievement as a self-enhancing value but not both. (2) How managers talked about climate change reflected the values of Power and Achievement and this will be discussed throughout this chapter. Table 4.1 showed how managers who drew on Power values did not draw on Universalism and described concern for others solely in terms of their close group, particularly family (Benevolence). They also drew on conservation values, particular on Conformity and Security. Managers who drew on Achievement could draw on either Universalism or Benevolence values or both and this will be shown to be an important observation throughout this section.

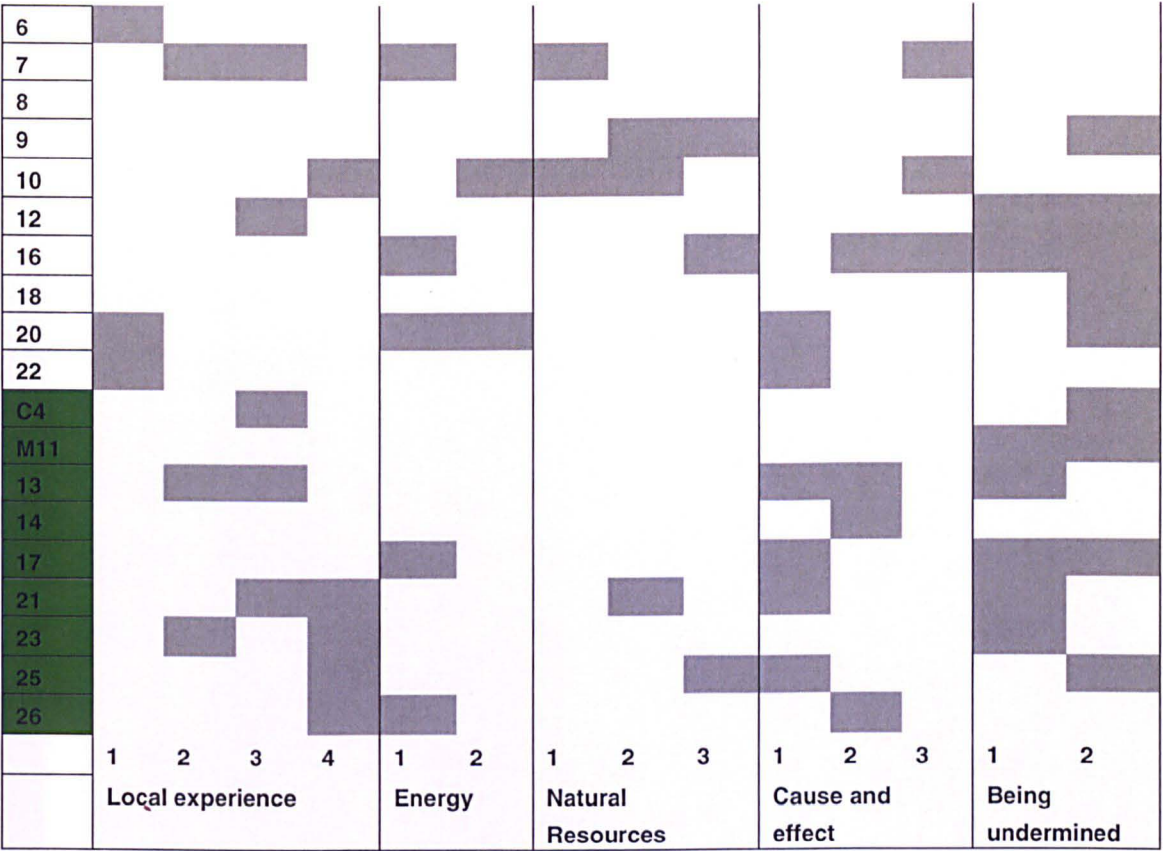
Table 5.1 Overview of what managers said climate change meant to them

Key: On the *two-part table below*, the horizontal axis relates to the ideas that managers described as follows:

Local experience	Energy	Natural Resources	Cause and Effect	Being undermined
1. Seeing local places cared for at risk. 2. Weather makes climate change personal. 3. Seasons blurring/ weather chaos. 4. Confusion regarding attribution of weather to climate change.	1. Choices regarding future sources of energy. 2. Oil running out, need better efficiency.	1.Consumerism is harming other societies. 2. Our poor guardianship is harming our future. 3. Sustainability is easier to understand (than climate change).	1. It is natural, we will adapt. 2. Partly natural, partly human, we should do something. 3. It may have disastrous consequences.	1. The media is causing unnecessary debate and confusion. 2. Vested interests are deliberately creating debate and scepticism.

The vertical axis relates to managers' code numbers. Female managers are highlighted in yellow; Managers drawing on Power are highlighted in green; Male managers drawing on Achievement are shown in white.

	Local experience				Energy		Natural Resources			Cause and effect			Being undermined	
	1	2	3	4	1	2	1	2	3	1	2	3	1	2
C1														
2														
3														
5														
6														
7														
8														
M5														
15														
19														
24														
M1														



5.2.2 Individual case studies

The difference between how managers talked about climate change and how this relates to their values can be introduced through the case studies of Lawton, Robert, Suzanne and Caroline. As a reminder, the Manager code (M number) reflects the summary in Table 3.1. A full summary of values is in Table 4.1.

Robert (M14, Power, Benevolence, Conformity, Security)

Robert started by joking that his father-in-law saw climate change as a plot to raise taxes. Robert said he saw himself as someone trying not to ‘be screwed’ by bigger companies with deeper pockets than his. He said that he genuinely cared about climate change but experienced a lack of control, authority and credibility in his business dealings and found other people dismissive of his ideas about it. For example, he offered to interview three potential intern students and was irritated that the campus had insisted they came to him. He

said he did not trust them to organise their travel together and envisaged three separate, wasteful journeys. He was cynical and sceptical about other people's efforts and motivations. However, he thought that despite the 'confusion' over the people at UEA 'forging data', it seemed a pretty concrete argument to him that the energy society was putting into the atmosphere was having a significant, detrimental effect. This concerned him because he believed it would threaten the security of the environment that his children would grow up in.

Caroline (M15, Power, Benevolence, Security)

For Caroline, climate change was potentially horrific and threatened her ability to run her business, as well as the future of her children and grandchildren. She saw the world as being irrevocably changed in far reaching ways and not for the better. She said that without wanting to be all doom and gloom, the economics of oil running out and the logistics of being able to get at resources were alarming and 'we' needed to be able to protect what was there for our use. Climate change threatened her ability to get supplies through and everything associated with her business and her family's future. In addition, Caroline saw climate change as a business opportunity to position her company in an advisory capacity regarding energy reduction.

Suzanne (M24, Achievement, Benevolence, Tradition)

Suzanne first responded by saying that she did not really see climate change as an issue for her consideration and did not have much that she wanted to say about it. She felt it was a difficult one that she did not really understand. However, when prompted, she said she thought climate change was part-natural and part-human; where climate had changed over time but where mankind was clearly having an effect and accelerating the changes. She felt that the media fluctuated with what they said and that she probably 'sat on the fence' and was undecided. Suzanne did not want to talk about climate change; explaining that she believed she had no experience of it. She said that she did not recognise climate change as an issue

either for her or her company. What mattered to Suzanne was the idea of sustainability and she made no connection with how climate change might threaten her concept of that. She talked passionately about how sustainability was much easier for her to understand because whatever they took away as a company, they would want to replenish. Sustainability was important to her father; it was part of the company's ethos and it was important to her.

Lawton (M10, Achievement, Universalism, Benevolence, Self-Direction, Security)

Lawton described climate change as a 'profoundly emotional and ethical issue'. He felt angry at how the current generation were wasting resources and carrying on business as usual. He felt it was ethically wrong for so many people to be disengaged from the big issues and not feel any connection between the way in which they live their lives and the effect that was likely to have on others. He had read the book 'Six Degrees' and described himself as very aware of the potential changes that climate change might bring and how those changes were going to affect the globe as a whole. He explained that while the UK would be largely protected from the worst effects, that it would not be possible for the country to shelter from the effects that climate change would have on other parts of the world. He was very concerned by the effects of climate change and believed that all the comforts and security that his generation had enjoyed, including food, healthcare, clean water, energy, freedom from conflict, and education were threatened. He was also concerned for the impacts of climate change on his children and their children.

These four case studies start to illustrate the complexity and diversity of ideas expressed by the managers in this study. Although each individual was the owner-manager of a small business, it did not mean that they shared a common view of climate change. Instead they each drew on their own values and experiences to make sense of climate change in their own way. The managers in this study are part of a lay audience that is exposed to both social and

professional ideas about climate change and this is reflected in what is important to them. These ideas will now be explored in greater depth in the remainder of section 5.2.

5.2.3 Locally seen and experienced

Changing weather

When asked the question: ‘what does climate change mean to you?’ one of the most instinctive responses was to talk about changing weather patterns. Although managers described different ways of understanding these changes, climate change as changing weather could be seen and personally experienced. In this way, climate change could be seen to be real and to be happening and to be a sensemaking trigger that required attention. It was argued that climate change needed to be personal in this way because, *‘we have insular little lives, climate change is about what affects you’* (M23).

The idea of a ‘weather framing’ for climate change is longstanding, with nearly 20 years of research showing how lay audiences commonly think about the weather and climate change (Bostrom and Lashoff, 2004). However, whereas this framing was seen as problematic by Bostrom and Lashoff, (ibid), the observations of individuals and communities, particularly within vulnerable environments is now an active stream of climate change research where local understanding is acknowledged as relevant (e.g. Cochran et al., 2013; Ryghaug et al., 2010; Turner and Clifton, 2009). The British are acknowledged to be ‘obsessed’ by the weather (Hamblyn, 2012, p7) and the idea of ‘weather weirding’ (Hamblyn, ibid, p7) and a weather framing of climate change has received extensive recent coverage in the UK press (Boykoff, 2008, p549) presented as both fact (e.g. Parnell, 2012; BBC Horizon 2011-2012) and fiction (e.g. Delingpole, 2012).

In describing how they made sense of climate change through changing weather, managers drew on childhood as well as more recent memories to reflect on how the weather appeared

to be changing and associated that change with climate change on the basis that, “*You’d be a fool not to see some sort of link*” (M21). However, changing weather was not necessarily associated with any immediacy and managers were able to frame climate change as a future problem. Managers saw the weather changing in terms of seasons blurring, and becoming less distinct and predictable, as well as in terms of “*freak weather*” (M21) that was on a scale and frequency not witnessed before. However, there was still confusion, particularly exhibited by those managers motivated by Power values, about whether particular weather events were caused by climate change or might be attributed to other natural causes. There was also concern that thinking of climate change as changing weather was over-simplified and that it was difficult to say with any certainty that a particular event was caused or not caused by climate change. This lack of certainty was associated by M23 with the UK’s typical approach to disaster, which he described as: “*I’ll worry about it when it happens*”.

Table 5.2 Summary showing how managers understood climate change as about the weather changing

<p>The weather makes climate change personal</p>	<p><i>“Windy days make kids hyper... I have a lot of friends who have noticed it, the wind does have an effect on them, it agitates them and they’re not calm when the winds are blowing. We’ve had wind now blowing for day after day”</i> (M19).</p> <p>Also referred to by C3, C7, M7, M13, M23.</p>
<p>Seasons blurring / increasing weather chaos</p>	<p><i>“There has been massive flooding and I think it’s 200 years worse or something, and that’s damaged people’s houses and it’s something you won’t expect, in winter you expect snow and quite a lot of river floods, and it has been changing, and within two days, it was minus twenty one night, and plus ten the next</i></p>

	<p><i>day, and it's all getting crazy. Even my father, who, doesn't have an education, keeps saying about the climate change; it's not like it used to be before" (C3).</i></p> <p>Also referred to by C4, M7, M12, M13, M21.</p>
Confusion regarding attribution	<p><i>"You can look at a lot of things that are going on in the world now and you can say: is this a result of climate change? Or you could say, maybe it's just chance and it's about time the world had a few natural disasters" (M21).</i></p> <p>Also referred to by M10, M23, M25, M26.</p>

Special places at risk

Experiencing climate change locally and personally as weather, also relates to the notion of making sense of climate change through attachment and understanding of local places. Adger et al. (2011, p3) argue that this is an underemphasised aspect of climate change policy, with Rogan et al. (2005, p148) explaining how place is associated with identity and personal meanings, such as family continuity, spirituality, growth and emotions. Attachment to place is not the same as connectedness to nature (Gosling and Williams, 2010): whereas the former is about self-identity, the latter is found to concern an 'expanded sense of self' (ibid, p303) that emphasises care of non-human species. Five managers in this current study talked about seeing climate change as a threat to places that were significant to them. In this, they expressed a sense of wanting to protect the places that they held in affection and this may suggest a link with Benevolence values (see Tables 4.1 and 4.5). It was suggested by the managers that seeing the threat directly to places they knew helped them to understand climate change as something real and personal.

Table 5.3 Climate change as a threat to special places at risk

Special places at risk	<p><i>“East Anglia will change because we are an agricultural area and we depend on our agriculture. So if climate changes and it means agriculture has to change, then I'd say the landscape will change. Obviously it's happening on our doorstep and I mean, as we are fairly low-lying here too, sea-level change would also be one of the drivers” (M20).</i></p> <p><i>“My interest in the environment started with things that were tangible to me. I had my favourite places where I took my dog; I gave them names, different hills and woods and things and then I saw them disappearing. I thought well, this is not right and I was upset about it. This environmental champion's role helps me do something small but positive for the environment” (C3).</i></p> <p>Also referred to by C1, C7, M6.</p>
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5.2.4 Climate change and energy

A second key theme saw managers describing climate change as ‘to do with energy’. The importance of energy as a framing of climate change may reflect how managers are likely to have experienced a long period of energy price rises through the latter 2000’s (Vidal, 2013b), along with messages from government and business support organisations regarding the opportunity, and increasing need, to save money through improving energy efficiency. Messages in the media (Marshall, 2012; Caldecott, 2010) have also talked about energy running out and how this will affect high energy business customers first. Energy in the media has also been framed in terms of a UK dependency on imported oil and gas and deliberately

linked with a justification for a new generation of nuclear power reactors (Caldecott, 2010; Bickerstaff et al., 2008). Sensemaking is a social process (Weick et al., 2005, p 417) and how managers saw the media's role in climate change will be discussed in section 5.3.5. Hulme (2009) refers to climate change in terms of 'ethnic, national and global security'; an idea reflected in my findings with managers calling for energy security in order not to be reliant on foreign supplies of gas and oil.

The different values that managers drew on could be seen in the very different ways that managers talked about energy. Managers talked about the need to agree future sources of energy (reflecting Power, Achievement and Security values), as well as about reducing the speed with which energy ran out through more efficient use (reflecting the Achievement value of efficiency). Where managers discussed the need to agree future sources of energy they talked about both alternative energy sources (such as solar) and nuclear energy and related the idea of climate change to ensuring energy security and future energy needs. This was the only way in which managers who appeared to draw on Power talked about energy. With both approaches, confusion and concern were expressed about the technology and long term energy security. Wind power could be seen as obtrusive (particularly by managers drawing on Power) and inefficient, while nuclear power provoked fearful reactions regarding waste disposal and plant safety (particularly by managers drawing on Achievement). There was also concern that energy choices had not been properly debated. By linking climate change with contested ideas about which source of energy should be developed, managers emphasised disagreement and polarised their positions. This meant that managers described future energy decisions as a choice between either nuclear or alternative forms and spoke in negative terms where they referred to the 'other' option. Managers also described their frustration at a perceived lack of investment and government commitment into their preferred choice of technology. Government decisions were seen as important to businesses and managers felt that visible, consistent commitment into either route was lacking and would

continue to be unavailable because, *“the government is short of money, the country is short of money”* (M1). This perceived lack of investment in long-term choices was seen as unhelpful for businesses as they relied on a dependable supply. Both sources of energy were linked by managers with the idea of technical solutions that moved society away from a dependency on oil. As M22 explained: *“The big question for me is: how are we going to source the energy in terms of nuclear or whatever because electricity will be the source energy of everything?”*

Managers also described climate change in terms of oil running out and energy efficiency. For some managers, there was overlap between these two ideas and they described how oil was running out because our human use of it as a resource was wasteful and inefficient. This meant that whether saving energy helped to reduce climate change or not, it was seen as a good thing to do that was ‘*common sense*’ (M15). The idea of wastefulness was a strong and emotive theme. For example, Lawton said that *“our generation has been fantastically comfortable and able to waste oil and gas as we choose. To waste those resources is just stupid, ridiculous and outrageous”*. There was a belief that businesses would continue to become more energy efficient but also a ‘*despair*’ (M19) that successive UK governments had looked to invest in developing more energy rather than encouraging people to use less.

Seeing oil running out as wasteful was also associated with other ideas about wastefulness and the over consumption of resources, which will be discussed in detail (section 5.2.5) below. The idea of oil running out was also described in terms of, ‘Peak Oil’⁸ (e.g. M5). Lawton explained that: *“I feel a sense of urgency and to wait for things like Peak Oil to happen to make us change the way we behave is probably too late, that’s the thing that worries me*

⁸ Peak Oil Theory argues that the global demand for oil will soon be greater than global supply. See for example, Friedrichs, (2010) for how these ideas are viewed in different countries and the potential implications.

most, we need to do things before then to make a difference". This example also illustrates a significant difference between the 'oil running out' versus 'alternative energy source' constructions: as described above, seeing climate change in terms of the need to commit to alternative energy sources was associated with the ability of humankind to find technical solutions and adapt to future changes. The idea that oil is running out was described instead with a more immediate need to act on reducing carbon emissions. However, unlike the managers describing this construction in terms of energy efficiency, who saw saving energy as a good thing in itself, Peak Oil was described in terms of an economic imperative to delay the prohibitive costs of a future without oil. This was described without reference to mitigating the effects of climate change.

Within the idea of Peak Oil, two further, conflicting positions were described. Firstly, Peak Oil was a way of making climate change concrete; *"It is really obvious and translates directly to what you are doing"* (M5), and was related to the increased costs of fuel and resources that would affect every individual. Alternatively, Peak Oil was about technology *"Squeezing oil like blood, metaphorically, out of stones"* (M17). This could be seen as either *"technology keeping pace with change"* (M17) and an approach that would ensure oil was available for some time yet to come or as a desperate attempt to maintain the status quo while *"ripping apart"* (M5) fragile landscapes.

Table 5.4 Summary showing how managers understood climate change as being linked with energy

Choices regarding future sources of energy	<i>"I have concerns about the long term future and I have concerns about energy security. It's not really environmental concerns but we're putting all these houses up and where is all the power going to come from?" (M20).</i>
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	<p><i>"The decisions the government take in the long term are going to be important for our electricity supply and whether we go for nuclear or whether it's gas or whether there are incentives enough for wind farms, solar PV or whether we just sort of cross our fingers is important to us. We need to know, are the lights going to go out? (M1).</i></p> <p>Also referred to by C1, M7, M11, M15, M16, M17, M19, M22, M26.</p>
<p>Oil running out / need for better efficiency</p>	<p><i>"It's not an oil thing. Well it is an oil thing but it's a cultural thing. When we change the way we live then maybe we can change what we need to live. So we need to reduce the amount we need to sustain our current level of living, which requires this amount of energy, it requires this amount of fuel, it requires this amount of fossil fuel, you know, we need to use less" (M18).</i></p> <p>Also referred to by C5, M1, M5, M10, M19, M20.</p>

5.2.5 Climate change and natural resources

The theme relating to natural resource use understands climate change as symptomatic of western consumerism and can be related to Hulme's framing of climate change as 'global justice and the inspiration of a network of invigorated campaigning organisations' (2009).

There is also a significant literature regarding a justice framing of climate change (e.g. Walker, 2012; Posner and Weisbach, 2010; Paavola and Adger, 2002). This framing can relate to environmental and social justice between countries as well as justice between generations; where future generations are expected to inherit a poorer world with problems caused through current greed and inaction. The premise is that climate change is caused by

the 'rich' developed nations yet it will be the 'poor' developing nations that will be affected first and hardest. The developing nations are also considered least resilient to responding and adapting to climate change. This is considered morally wrong (e.g. Singer, 2004). This framing has given rise to a number of NGO campaigning groups, including 350.Org, Climate Camp and Climate Justice Action, and is also used by existing NGOs, such as Oxfam, to re-engage supporters. It is also a framing used by religious organisations that fits comfortably with their existing campaigns on poverty and justice (e.g. Catholic Climate Covenant; Operation Noah; Mormon Silence on Climate Change).

Managers who argued that Western greed and selfishness was both wrong in itself and wrong because of the impact it had on others drew on both Universalism and Benevolence values. Firstly, climate change was linked by managers drawing on Universalism with arguments that consumerism was ethically wrong. At the heart of this were descriptions about how the pursuit of happiness through the purchase of consumer goods was greedy, selfish and a poor reflection on society. They accused consumerism of encouraging people to, "*buy rubbish, endless, endless rubbish*" (M19) while creating an unhappy society. In addition to being described as a wrong in itself, managers also spoke passionately about the impact of Western greed on other people and life forms. This was described as an ethical and emotional issue that was deeply unfair.

Secondly, managers described how the way we use natural resources was wrong because it was greater than the Earth's capacity to supply resources. Managers referred to poor guardianship and/or poor stewardship where climate change was a reflection of human mismanagement, where "*we have to stop cutting down trees and burning stuff and using unnatural products*" (M9). This frame saw natural resources as a resource for human use but there was concern regarding the impact of human actions and the inability of natural systems to continue to meet those needs. The concern seemed to come from Benevolence and/or

Security in that managers were worried about the world their children would inherit. For example, managers described a range of far-reaching changes that were occurring as part of 'our' poor guardianship. These changes included "*frightening changes*" (C1) that would affect food production, water availability, the habitability of large parts of the world and lead to mass population migration. In this way, managers described a direct link with climate change to a future world that would be unpleasant, with the concern focused on what the world might be like for their own children and grandchildren.

Without being prompted, eight managers who described their understanding of climate change with regards to natural resource depletion also used the term sustainability. The term was defined as: "*not using up things faster than we should do*" (M25) and "*paying our way*" (M16). It was argued that the idea of sustainability was easier to understand than climate change in that sustainability was "*fairly black and white in that what you take away you replenish*" (Suzanne). However there was disagreement about whether climate change was helpful in understanding sustainability or not. For example, M5 argued that climate change could be seen as an "*easy phrase that could get in the way*" of understanding and discussing specific issues, such as food shortages and poverty. Conversely, M9 believed that through climate change "*scientists are channelling our thinking and pushing the way we do things better*".

Although acting on climate change will be discussed in detail in Chapter 6, it is worth noting that in the context of this framing three managers (C1, M9 and M15) expressed confusion about how they should deal with the issues raised. As (C1) explains, what can seem like an answer can just lead to further questions:

"I love my tea, so what can I do about that, you know, for me the only thing I can do about that is chose fair trade organic. But that allows me to go 'I'm fine', but that doesn't solve the

problem; there's not enough organic fair trade tea out there for everybody. Similarly, I sign up to green energy. I can say, oh 100% of my electricity comes from renewable energy, I pay extra for that, I'm able to do it. But there's not enough green energy out there for everybody'.

Despite the business message of win-win (see section 2.3) regarding resource efficiency and the need to use less, there was no reference to using fewer resources in order for resources to last longer, although there was some suggestion that tightening and shortening supply chains could improve control and reduce risk.

Table 5.5 Summary showing how managers understood climate change as being about our use of natural resources

Consumerism is wrong and through this we are harming other societies	<p><i>"The more greedy we are for resources, the more disadvantaged the poor get. Undoubtedly there's people who are living on the edge, who will be pushed over the edge by climate change and by the greed of developed countries"</i> (M1).</p> <p>Also referred to by C1, C3, C5, C7, M7, M10, M19.</p>
Our poor guardianship of resources is harming our own survival	<p><i>"So that links directly with climate change because I don't want my kids to live in a world where they've got no water and they're fighting for resources and they're living in a climate that's proving even more difficult and there isn't enough food"</i> (C5).</p> <p><i>"it's very obvious that non-renewable resources are being depleted, that forests are under threat, that climate change is happening"</i> (M1).</p>

	Also referred to by C1, C5, M9, M10, M11, M21.
Sustainability is easier to understand than climate change	<p><i>"I think the global warming / climate change thing is getting in the way because it's being shouted as an easy phrase. It's getting in the way of the food shortage argument and all those things because it's used in the battle and just goes backwards and forwards. Sustainability is simpler, it's easier to understand" (M5).</i></p> <p>Also referred to by M9, M16, M24, M25.</p>

5.2.6 Confusion over cause and effect

Confusion about the cause and effects of climate change can be seen within a large literature on climate change scepticism and was a clear theme in this current study. The closest to Hulme's frames would be climate change as 'scientific controversy' (2009), although the findings are more nuanced. Rahmstorf (2004) developed a framework to help understand how the lay public believes in climate change and this is useful in understanding my findings for this section. Rahmstorf (2004) distinguishes between those who deny that the Earth is getting warmer (Trend Sceptics); those who deny that humans are causing the warming (Attribution Sceptics); and those who accept that warming is occurring and that humans are at least partly to blame but who deny that the result will be too bad (Impact Sceptics). As will be seen, confusion with regard to cause and effect can be understood in terms of Attribution and Impact Scepticism. In other words, the managers in this study did not deny that the Earth was getting warmer or that climate change was happening but they were not clear whether or how far, human actions were to blame or what the effects would be. Poortinga et al. (2011) draw on both Rahmstorf's (ibid) framework and the Schwartz Value System (SVS) to investigate how the cause and effect of climate change was understood by the British lay public. They see declining belief in and commitment to action on climate change between

2005 and 2010 and argue that the different types of cause and effect scepticism described by Rahmstorf (ibid) are closely inter-related. Although Poortinga et al. (2011) separate environmentalism from other self-transcending values, they conclude that "*climate scepticism is rooted in core values and world views*" (p1015) and see those with more traditional values as most sceptical. This can be supported through a 2013 Daily Telegraph newspaper poll: where Poortinga et al. (2011) found 18% of the general public believed climate change to have natural causes, the Daily Telegraph newspaper with its conservative political readership (Newton and Brynin, 2001) found this view supported by 46% of their readers (Holehouse, 2013).

The managers in this study did not challenge whether climate change was occurring but they could express confusion regarding its cause and effect. For most of the managers in this study, climate change was a concept they were trying to make sense of. In this, managers drew on a range of ideas, from climate change being a natural process to an understanding that it was caused by human activities. The consequences of climate change were also unclear and could be divided into two broad visions of the future where either both the planet and humankind adapt and survive to some degree, or where the effects will be catastrophic with particular concern for the world that today's children will inherit. Again, there were differences between managers drawing on Power and Achievement values with the strongest suggestions that climate change was natural coming from those drawing on Power values.

Only three managers said that climate change was an idea to which they had given little thought. For example, when prompted with the question: 'what does climate change mean to you?' C2 responded: "*My mind's blank*" and Suzanne replied: "*If I'm honest. I haven't considered that perhaps as much as I should*". Only M16 was unclear about whether climate change existed with all other managers implying climate change was real but that its cause was unclear. The commitment to the ideas that managers described also varied with some

managers being firm in their beliefs and others being unclear and confused. Managers who described climate change as natural or largely natural described their belief with the most conviction while also arguing that the planet and/or humankind would survive and adapt.

Managers referred to previous climatic changes to support their belief that climate change was a natural process. For example, M21 referred to *"natural cycles"* and events such as volcanic eruptions and change over both geological time such as ice ages, and historic changes such as the River Thames freezing in Victorian winters. While the effects of these natural changes were unclear, humankind was expected to *"get there in the end because we're humans and we'll figure it out"* (M22). M20 expressed the belief, for example, that humans have a *"huge capacity to develop technological solutions"* and that those solutions would come to our rescue. In this, no reference was made to our use of current technology as contributing to the problem through increased carbon dioxide levels or to the inability of new environmental technologies to get to market.

Other managers described climate change as *"a difficult one"* (M13) that was probably caused partly by both natural processes and by the actions of humankind. In this, managers were less sure about their ideas and suggested that *"what's the cause and what's the effect is a little bit cloudy"* (M17).

M11 (and M17) suggested that, *"a little knowledge is a dangerous thing, (as) the little knowledge I have suggests there are still a lot of unanswered questions"*. These two managers both drew on school/university geography lessons to suggest that science was unlikely to have *"made the leap in understanding"* required to fully comprehend how human activities could affect climate systems or how future models of climate change could be accurately predicted. *"Confident predictions"* (M17) made three decades ago that an ice age was coming were cited to support this view.

Only C1 and C4 described climate change as a phenomenon largely driven by human activities. While it was seen as *“common sense that if we’re taking carbon out of the ground and stuffing it into the atmosphere”* (C4) would have an effect on the planet and climate, there was still confusion regarding new evidence and what that meant. Section 5.3.5 discusses how the media was seen as bringing confusion to new stories.

While the cause of climate change could be seen as unclear, it was only managers who drew on the Universalism value of ‘protecting the environment’ that described potential disaster scenarios with anxiety and suggested an urgency to act. For example, Lawton referred to the film ‘The Day After Tomorrow’, and to the book ‘Six Degrees’ to support the idea that urgent action was needed before it was too late. Such scenarios included confusing ideas about potential sea level rise, glaciers melting, an ice-free Arctic, loss of the Gulf Stream, an ice-age in Britain, changes to ocean salinity, land mass changes, changes to the Pacific Ring of Fire, an increase in volcanic activity, flooding and desertification. There was also mention of the phrase ‘Tipping Point’ (C1) which could result in *“a Day After Tomorrow sort of tipping scenario where suddenly the whole earth is plunged into an ice age or something like that”* (M1). In addition, these ideas were also expressed in terms of concern about the impact of such uncertain and potentially catastrophic changes on managers’ children or their children’s children but only by those who also drew on the need to protect the environment. For example, M16 explained how *“I have four children and I don’t really want to think about what it’s going to be like for them”*.

Table 5.6 Summary showing how managers thought about the cause and effects of climate change

<p>Climate change is natural, we will adapt</p>	<p><i>"It's Nature doing what Nature is good at which is adapting itself. Why should we be worried if the average temperature of the planet is going up by one tenth of a degree? It's bounced around a hell of a lot more than that in the last few million years!" (M17).</i></p> <p>Also referred to by M13, M20, M21, M22, M25.</p>
<p>Climate change is probably partly human, we should do something</p>	<p><i>"I probably sit on the fence slightly because I think yes, man is undoubtedly having an impact but, if you look back on history, the world has gone through climatic changes, dramatic climatic changes over time. The difference now is that this is being accelerated and therefore I don't think man has created climate change but I think man is accelerating climate change" (M24).</i></p> <p>Also referred to by M7, M11, M13, M14, M16, M26.</p>
<p>Climate change may have disastrous consequences</p>	<p><i>"I suppose I'm in the camp where I really do believe we're in extreme difficulties" (C1).</i></p> <p>Also referred to by M1, M10, M16, M19.</p>

5.2.7 Climate change, mixed messages and profiteering

In the previous section a number of managers described how the causes of climate change were unclear to them. None of those managers suggested that the ideas were unclear to

them because they did not understand the scientific argument; indeed, there was no reference to the idea of climate change as a scientific idea. In this section, managers are shown to describe climate change as a concept that is being deliberately undermined, firstly by confusing media coverage and secondly by parties with vested interests. Again, there is no reference to the scientific consensus on climate change being undermined, only to climate change as an 'idea' being undermined. In this, managers either described the media as encouraging confusion for the sake of a good story or they viewed the spread of confusion as a deliberate attempt to produce conflict and disagreement through the furtherance of climate scepticism. Secondly, managers saw climate change as being undermined by exploitation and inconsistency by government and big businesses. In this, climate change was seen as an opportunity to financially profiteer and this can be seen as similar to and building on Hulme's (2009) framing regarding climate change as 'justification for co-modification of the atmosphere' where buying, selling, regulating and taxing carbon turns a public commons (atmospheric carbon dioxide) into a privatised asset (Hulme, 2009, preface xxvii-xxviii).

The thoughts of managers in this study echo literature exploring climate change communication theories. For example, Dunlap and McCright (2011; 2010) support earlier evidence of well-organised politically conservative groups associated with the fossil fuel industry using the journalist norm of balanced reporting (Boykoff, 2007) to deliberately create debate and confusion; with Lockwood (2008) observing the proliferation of this most recently through online media. Uncertainty, inconsistency and distrust of mixed messages have been found to undermine the ability of individuals to engage with climate change by eroding trust and understanding (Christie, 2010; Lorenzoni et al., 2007). This may be particularly important for individuals drawing on Benevolence where trust is a marker value. The role of the media will be further explored in the section looking at social influences on sensemaking (section 5.3.5).

The managers in this study criticised the media for either continuing a debate that should no longer exist or causing confusion. This was seen as being done in the name of 'balanced reporting' but was in effect unbalancing the news as it gave a platform to minority views that could be "*almost personal opinion*" (C7). It was seen that aspects of the media liked to discredit stories and saw newsworthiness in "*scare-mongering*" (C7) and "*lies*" (M12). Significantly, new information coming from science was seen as confusing when it was presented by the media as novel, rather than as building on existing ideas or evidence.

Managers also saw debate being used to create doubt as a deliberate strategy to undermine commitment to change by people and organizations with vested interests linked to oil. The result of this was conflict, disagreement and scepticism. Although the email 'controversy' at the Climate Research Unit, University of East Anglia (UEA)⁹ took place in November, 2009, 12-18 months before the interviews for this research were carried-out, it was still referred to by six managers as an example of such a deliberate attempt. Managers, described how "*climate change has got a bad name for itself*" (M16) after the "*wonderful debacle at UEA*" (M5). The case of UEA was described as an example of the way in which some people with power have vested interests, political backing, links with oil companies or are "*so driven by money that they can put aside the fact that they are hurting people*" (C7). In addition, it was argued that part of this debate encouraged a "*culture of fear*" (M5) so that scepticism was easier for people to accept. As a 'maladaptive coping strategy' (Hamilton and Kasser, 2009) dismissing climate change in order to avoid the need to act will be discussed in Chapter 6.

Managers drawing on Achievement values in particular often used strong emotional and ethical language to describe how government messages were inconsistent with government actions and how this undermined their view of policies aimed at addressing climate change. Inconsistency by government could be seen as a particular issue for business who may need

⁹See Maibach (2012) for a useful summary of the events and implications.

to look to government to set long-term policy frameworks within which they can invest and plan. This inconsistency by government was described in three ways; firstly as an opportunity to increase taxation, secondly as a vote band wagon, and finally as policy discrepancies between and within government organisations.

Within this overall way of seeing climate change as a story of inconsistency between message and action, managers also expressed concern that vested interests within both government and big business would continue to undermine messages of change through the continuance of business as usual. For example, M11 argued that; *“an awful lot of the time, the agendas put forward serve certain corporations more than the people they’re seeking to help”*. Large businesses¹⁰ were also criticised for promoting their products using *“hype”* (M25) and *“green wash”* (M5) to *“profiteer”* (M12) from consumers’ desire to address climate change through their purchasing behaviour. As M18 explained, this undermined the overall message by making it *“shallow. When people see this stuff they think nothing’s going to happen so they leave it”*. Managers described how businesses were profiteering by increasing prices as well as, *“making themselves look safe and friendly”* (M5) by promoting themselves as green. It was this latter aspect that managers referred to as green wash. As M5 explained: *“It’s the use of names isn’t it, the language. Ecosensuals for example, they’re teeny little bottles, shipped over from China, full of Parabens and SPF – not remotely eco-friendly but it’s got a nice name and a little print of a leaf”*. The perceived shallowness of green wash meant that climate change had become *“bland because it’s a blanket term that’s covering everything”* (M5).

The perceived shallowness of green claims may contribute towards understanding the gap between espoused support for less environmentally-harmful products and their take up (e.g.

¹⁰How SME managers saw the opportunities for large business to lead by example will be discussed in section 6.2.3

Chen and Chang, 2012; McDonnell and Bartlett, 2009; Prakash, 2002). How green wash fits in with the managers' overall picture of inconsistency is also important. Managers are making work decisions by drawing on personal values and applying personal social experience to professional situations. Sensemaking of climate change in a social context will be discussed further in section 5.3.

Table 5.7 Summary showing how managers ideas about climate change were undermined by mixed messages and profiteering

<p>Media creation of debate and confusion</p>	<p><i>"Reading in the press, you get different stories. Oh the ice caps are melting we are all going to be dead in 50 years, it's the end of the world. And then other people say it's a storm in a tea cup, there's no proof. So you see conflicting stories" (M21).</i></p> <p>Also referred to by C7, M12, M13, M23, M24.</p>
<p>Vested interests creating debate and scepticism</p>	<p><i>"He reads the Daily Express and they've got a vested interest because they've got political backing and they can gain quite a bit of cash from making us believe the big, bad monsters aren't there and you can sleep safe at night because it's all ok" (M5).</i></p> <p>Also referred to by C1, C7, M5, M16.</p>
<p>Climate change is undermined by exploitative taxes</p>	<p><i>"When they talk about global warming and increased carbon and increased this and that, then suddenly start putting taxes on it and trying to make money out of it, well I think for us that's really just a taxation, whereas if they just say to people, just recycle, reuse, you're probably near enough there" (M25).</i></p> <p>Also referred to by M1, M12, M16, M18.</p>

<p>Climate change is just a vote bandwagon</p>	<p><i>"I personally lose faith in the hierarchy and the message if they don't walk the talk. I do feel they are just ticking a box with the public; it's a topic of the moment. If they carried it out with their actions, I would say crickey, there's something seriously wrong" (M12).</i></p> <p>Also referred to by M1, M7, M17.</p>
<p>Climate change is undermined by policy inconsistency</p>	<p><i>"The government says we need to reduce the amount of fuel we use but how many fighter jets have you got doing sorties?!</i> <i>When the government stops talking and starts acting, not on just a superficial level, then they can tell me to do more" (M9).</i></p> <p>Also referred to by M12.</p>
<p>Climate change is undermined by vested interests</p>	<p><i>"Let's take BP. Massive disaster in the Gulf, oil everywhere, what's happened? Err yes it's cost us billions of pounds to fix, we fixed it, goodbye. That's pretty much it. That publicity hit their share price, and guess what? They recovered, nothing changed" (M18).</i></p> <p>Also referred to by C7, M11, M20.</p>
<p>Climate change is undermined by green wash</p>	<p><i>"There are a lot of companies who want to maintain a high profile who say, look we're doing something about it so come to us; you can clear your conscience by buying my products. You can clear your conscience so you don't have to do anything about it yourself except use my products and then they charge you more just because it is branded differently!" (M9).</i></p> <p>Also referred to by C4, M5, M12, M18, M25.</p>

5.2.8 Section summary

This section has discussed the different ways that managers responded to the question: 'what does climate change mean to you?' Although the way that managers made sense of climate change could be understood within five key themes, it was clear that they had different ways of seeing these issues. Acknowledging the values that managers were drawing on to construct their ideas helped to make sense of these differences. Managers' ideas were consistent with their values. New cues to sensemaking could challenge how they thought about climate change but the tension was within the constructed frame rather than with the values. The five key themes were shown to build on existing literature regarding the lay understanding of climate change and add a perspective from a specific SME audience. The findings show what was important to managers in understanding climate change and how their values highlight both personal and professional needs.

5.3 Climate change in a social context

This section briefly explores how managers drew on their parents, families, friends and colleagues and other social actors to help explain how they made sense of climate change. This can be understood in the context of sensemaking as a social process (Weick et al., 2005, p417) whereby individuals create plausible meaning together through shared ideas and experiences within a local context. The social perspective emphasises the relationships within which sensemaking takes place (Smerek, 2011, p81; Nijhof and Jeurssen, 2006, p318) and may include both face-to-face influences and those that encourage individuals to think about how others make sense of the same ideas (Weick, 1995, p7).

This section explores how managers made sense of climate change in relation to other people in two ways. Firstly, individuals, and the responses of individuals to key events, are seen to help form or challenge personal values. Secondly, individuals within both personal and professional contexts are seen to offer a supporting role that can reassure managers that

their understanding is appropriate. These two ideas may relate to those of Deutsch and Gerard (1955) who described two forms of social influence: 'informational' where an individual accepted information from another as evidence about reality; and 'normative', where an individual conformed with the positive expectations of others (ibid, p635). They argued that from birth onwards, individuals are encouraged to accept the perceptions of those around them, with the greatest influence coming from those in groups or roles closest to the individual.

5.3.1 Parental values

Six managers talked about how their parents helped to influence their feelings about the environment. In particular, contact with nature as a child was drawn on as a special time of closeness or as part of developing a sense of ethics. Managers described how they spent time gardening, walking and fishing with their fathers as well as a more general sense of being taught respect for nature and the importance of not being wasteful by their parents. These memories were associated with special time, often with the paternal figure and were linked by them to how they felt about the environment and the threat that climate change posed. Early parental values were also reflected in other childhood influences, such as religion and which newspapers to read. Although it is beyond the scope of this study to explore this issue in depth, there is a long literature that explores the importance of a childhood connection with nature for developing environmental awareness (see Bogeholz, 2006; Kals, 1999; Ulrich, 1981 for examples).

5.3.2 Personal events

A number of 'cues' (Weick, 1995) that could trigger sensemaking were identified. Five managers explained how they believed personal travel had helped to shape their views on climate change. This was in two different ways. Firstly, travel had helped M7, M16 and M25

to realise how other societies make use of all available resources and how Western society has a bigger effect on the environment. This had increased their sense of respect and compassion towards societies more vulnerable to the effects of climate change than the UK and relates to the social justice framing discussed in section 4.4.2 above. Secondly, C2 and M19 described how experiencing other parts of the world had helped them to see limitations in the UK approach and what else was possible. For example, more efficient public transport in Australia and engagement with the public to reduce energy use in California. Other personal events, such as divorce (M6), could trigger managers to challenge their existing social influences and assumptions.

5.3.3 Life partners and children

Five managers described how they were influenced by their life-partners and family. Life-partners could be important and particularly drawn upon where they were involved with the business. For example, in every reference to her company's approach to the environment, M19 referred to her husband, as joint owner, and what he thought. Managers described their own views about climate change in relation to those of their life-partner and talked about discussing ideas as a family, particularly in connection with the film, 'An Inconvenient Truth' and with children bringing home ideas from school.

5.3.4 Peer influences, social and professional

Seven managers made reference to conversations with peers, including both personal and professional contacts. Peers at a personal level were described as like-minded and drawn on more directly to support ideas that managers put forward. For example, C1 drew on what other mothers in her village said about the dangers of wind turbines in connection with human health in order to support her view that they should not be sited near schools.

Professional peers were referenced in terms of colleagues from other businesses and these conversations were clearly “*very useful*” (C3). Professional associations and business support organisations were also briefly highlighted by five managers. Here it was the personal messages given by event speakers that had encouraged them to reflect on their understanding. For example, C1 had been shocked to attend a national professional event where the opening speaker dramatically imagined, “*Right well, we’ve lost Hull. We’ve lost parts of Southampton*” but this had made her think about the implications of rising sea levels in the East of England from global climate change.

5.3.5 News and media

While managers did not talk about the newspapers they read, M14 and M5 both referred to how reading the Daily Mail seemed to explain why two people they knew did not accept a human role in climate change. As discussed in section 5.2.7, news and media were criticised by managers for undermining public understanding of climate change; suggesting their social role in perpetuating an understanding where the cause and effects of climate change are presented as unclear. While social media was not referenced, C5, M1, M5, M10, M15 and M19 described how they had seen some or all of the films, *An Inconvenient Truth*, *The Day After Tomorrow* and the *Age of Stupid* or read the book, *Six Degrees*. These media were described in powerful terms in both influencing ideas directly as well as being discussed with family and friends. Managers also talked about how current events and ideas seen in the news could help their sensemaking. For example, C5 described how the seemingly unconnected event of the Arab uprisings of spring 2011 helped her to see how aspects of society could suddenly change. Economic recession, the rising price of oil, and natural disasters, such as flooding, had shown how small changes could have a significant cumulative effect and were consequently worth doing. Media reporting of the Tsunami affecting Japan in March, 2011 had been particularly significant as it reinforced a sense of vulnerability within global economic structures. Altogether, a perception from the media that

there was an increasing intensity and frequency of weather-related disasters produced a sense of tension and unease and supported the framing of climate change as weather (section 5.2.3) and had encouraged managers to question whether these events were natural or part of a pattern related to climate change.

Table 5.8 Summary of how managers described their understanding of climate change in a social context

Paternal influences	<p><i>"My father was a very frugal person, he doesn't throw anything away, he repairs them and I think I've got that from him and I've grown up with a real aversion to consuming things for the sake of them, I really can't bear that" (C5).</i></p> <p>Also referred to by C3, C4, C7, M7, M16, M14, M19 M24.</p>
Personal events	<p><i>"I was in California years ago, and the local authority gave one low-energy light bulb to every household. And apparently the effect of that was they could build one less power station. And I do think that we need to be looking at how we get people to switch off a lot more" (M19).</i></p> <p>Also referred to by C2, M6, M7, M16, M25.</p>
Life-partners and children	<p><i>"So in terms of the three R's, which my wife tells me about all the time, which I can't remember; it's reuse, recycle, no it's reduce, reuse, recycle – that's the mantra that we try to get across to people in the business" (M10).</i></p> <p>Also referred to by C5, M15, M18, M19.</p>

Peer influences, professional and social	<p><i>"You know I was having a conversation the other day with the mothers at school and she was saying blah, blah, blah never mind this carbon footprint stuff and I thought, oh that's interesting!" (C5).</i></p> <p>Also referred to by C1, C3, C4, C5, M5, M16, M18.</p>
News and Media	<p><i>"So you know, they said the earthquake in Japan suddenly meant we couldn't get microchips in the UK so we couldn't produce new phones. If they'd been manufactured here and within our control we could still maintain our industry" (M9).</i></p> <p>Also referred to by C1, C2, C5, M1, M7, M10, M15, M19, M21.</p>

5.3.6 Section summary

This section has reviewed the actors that managers described as important to their understanding of climate change. In line with sensemaking as a social process, managers described how their parents helped to shape their early values and in particular a respect for the environment and for minimizing wastefulness. Events, such as travel and divorce, could acts as cues (Weick, 1995) to sensemaking by encouraging reflection on what was important to the individual. Family and peer influences were seen to reinforce managers' ideas by providing support and reassurance that their ideas were plausible. The media was seen to have a key role in both stimulating sensemaking and undermining (see section 5.2.7) ideas.

5.4 Chapter summary

This chapter has discussed in-depth the sensemaking of climate change from the perspective of the managers. The findings have shown how managers made sense of climate change in a number of different ways that were consistent with their values. When asked: 'what does

climate change mean to you?' none of the managers started by describing climate change as a physical process or by drawing on the science. Even though the association of climate change with carbon emissions was implicit, this was never the focus of what managers said. This may have been due to the phrasing of the question and asking managers 'what is climate change', for example, may have elicited different answers. Nevertheless, managers showed that they could be unclear about what caused climate change and could use the terms climate change and global warming interchangeably. The idea of greenhouse gases went unmentioned. Although this may highlight gaps in understanding, it also means that managers drew on what mattered to them most and showed how climate change was relevant to them. For example, climate change could be about how the weather was changing or about energy prices and it was about what they could see and experience personally. Throughout section 2.5.2, I explain how these findings relate to the framings described by Hulme (2009) as well as offering additional insight from a business perspective. Perhaps the most important point to note from these findings is that managers can and do think about climate change in different ways and hold more than one belief at a time. This suggests that managers are drawing on more than one value at a time and that simplistic arguments that rely on motivating engagement through one idea could be easily dismissed or challenged by the other values.

This chapter also briefly discussed the social actors and contexts that managers said helped to shape their understanding of what climate change meant to them. Both close personal and professional actors were seen to be important in shaping individual values and helping managers to apply those values to climate change. The role of the media was particularly interesting. In one way, the media was accused of creating unnecessary confusion and debate and undermining understanding (see section 5.2.7) but conversely, the media was also acknowledged as helping managers to see their own understanding in a broader context that might inform and engage them (see section 5.3.5).

Chapter 6: Responding to climate change

6.1 Introduction

Understanding how the managers in this study made sense of climate change is more than about exploring what climate change meant to them. The sensemaking ideas of Karl Weick (discussed in Section 3.2.3) show how individuals create their own social constructions through what they say and do. Whereas Chapter 5 focused on what managers said climate change meant to them, this chapter will focus on what they said they did about it. This means that this chapter will focus on how managers enacted their sensemaking of climate change in their everyday life (Ryghaug et al., 2011, p781) and applied this as an expression of what they did (Whitmarsh, 2009, p415).

Section 6.2 will explore who managers believed should be responsible for acting on climate change on both a personal and professional level, and how responsibility can be understood in the context of managers' need to protect their self-identity. Section 6.3 will look at how managers understood climate change in the context of ideas about business greening and how this related to acting on climate change within their businesses. Section 6.4 will explore the environmental actions that managers drew on in describing their approach to business greening. Section 6.5 will explore the mix of motivations that managers described for engaging with business greening. This means that this chapter will do three things: firstly, it will address questions regarding how the responsibility to act on climate change may be understood by SME managers; secondly, this chapter will address the issue of climate change as a motivation for acting on environmental issues by SME managers; and thirdly, this chapter will contribute towards understanding the motivations for SME managers to engage with business greening.

6.2 Responsibility for acting on climate change

As part of the interview schedule and in addition to asking the managers in this study about what climate change meant to them (see section 5.2), each manager was also asked about the responsibility for acting on climate change. This topic was introduced in an informal way (see section 3.3.2) by the open ended question: 'What do you think should be done about it?' Managers responded by talking about responsibility and who should be responsible for what actions. Within the literature regarding the lay understanding of climate change, there is a significant theme regarding responsibility (e.g. Wright et al., 2012; Ryghaug et al., 2011; Shove, 2010; Whitmarsh, 2009; Kellstedt et al., 2008; Lorenzoni et al., 2007). This literature finds that individuals need to blame someone else for causing climate change and find others, usually governments, responsible for solving it. Alternatively, they may reject a human role in causing climate change and insist that humans will adapt. Either way, personal culpability and the need to personally change behaviour is avoided. These ideas will be seen to be reflected in my findings but it will also be clear that managers had a clear professional self-identity and saw a role for small businesses to act on climate change. These two points are important because self-identity is at 'the root of sensemaking' (Mills, 2003 cited in Weick et al., 2005, p416) and the protection of self-identity is seen to be at the root of avoiding personal responsibility for climate change (Wright et al., 2012; Crompton, 2010; Crompton and Kasser, 2009; Hamilton and Kasser, 2009; Stoll-Kleema et al., 2001). This is particularly significant because government approaches across the Western world towards action on climate change are based on an assumption that personal responsibility is accepted (Shove, 2010, p1280).

6.2.1 Professional responsibility

In line with the literature discussed in Section 2.4.3 sixteen of the managers in this study described how they had a strong personal identification with their business. Consistent with

Hammann (2009), Vives (2006), Jenkins (2004) and Spence (1999), it was clear that managers' professional sense of responsibility played an important role in the strategic direction of the business. This could be seen in three ways, with some overlap between ideas. Firstly, managers described how the business reflected who they were as individuals. This meant that a change in the business approach to climate change would only occur as a reflection of change from the manager with business objectives and personal objectives seen as the same. Secondly, seven managers expressed strong identification with the role they carried out within the business or within their profession. Depending on how managers valued climate change, this could be used to either support or challenge approaches to climate change within the business. Thirdly, eight managers expressed a personal connection to climate change through their business role. This personal connection could be described either in emotional terms or as a special insight that came from who they saw themselves to be as a professional.

These findings support Wright et al. (2012) in emphasising the importance of understanding managers' self-identity with their business role. My findings show that managers can both use, and hide behind, their professional role to accept or dismiss responsibility for action on climate change. While the Wright et al. (2012) study looked specifically at the self-identities of sustainability managers, they found that climate change offered an opportunity for some managers to reinvent themselves into moral agents of change (ibid, p1469). An example of this within my findings can be found in section 4.3.4, where it was shown that managers drawing on the Achievement marker value of 'influential, having an impact' were able to use climate change to help them meet their need to make a difference. These two ideas mean that how managers understand their responsibility for climate change as part of how they see their self-identity as a professional is an important part of understanding how small businesses engage with climate change.

SMEs are understood to be often strongly embedded within their local communities (Spence, 2007). Eighteen managers drawing on Benevolence values (Table 4.5) expressed responsibility for the well-being of their employees and their families through their businesses. Further research (see section 7.5.4) may explore specifically whether managers with strong Benevolence values may demonstrate a greater sense of responsibility to act on climate change than managers drawing on other values. Further research may also explore whether SME managers, who see themselves as responsible for the activities of their staff and business, may feel more empowered than other lay individuals to engage with climate change.

Table 6.1 Summary showing how managers described a professional responsibility for acting on climate change

The business is who I am	<p><i>“My business is who I am as a person; it’s what you imprint on the company” (M23).</i></p> <p>Also referred to by M16, M22, M25.</p>
I am the role	<p><i>“As financial director, I am a cynic. My job here is to be hieratical in terms of challenging everything that happens and that includes anything to do with climate change. I play devil’s advocate to make sure the arguments put forward are properly thought through” (M11).</i></p> <p>Also referred to by C1, M10, M13, M17, M19, M20.</p>
I bring me into the role	<p><i>“I am a statistician so it isn’t that far-fetched in my mind that beyond the boundary you get (climate) chaos. It’s very much about control” (C4).</i></p> <p>Also referred to by C5, M5, M9, M15, M16, M19, M22.</p>

6.2.1 Personal responsibility

In addition to describing responsibility in terms of their professional self-identity, managers also recounted a sense of personal responsibility for acting on climate change. A recurring phrase was: 'I do my bit', which could be drawn on to explain why managers believed they should act, as well as being a reason why they felt they did enough and did not need to do more. This section explores what managers said about their personal sense of responsibility, where managers often used strong emotional language that included anger, frustration, guilt and helplessness. Noorgard (2006) explains that 'emotion management' is an important part of avoiding responsibility for acting on climate change. She argues that climate change is a threat to our individual and collective identities that raises fears about security, feelings of helplessness and guilt, and challenges everything that we hope the future holds. Removing 'unpleasant and unacceptable' feelings therefore becomes key to denial (ibid, p392).

In my findings, managers described a number of different ideas, with Lawton defining personal responsibility as: *"Acknowledging that your personal actions have a significant effect or the potential to have a significant effect, on the lives of others"*. In this first theme, there were two ideas; firstly that managers are *"trying to do their bit"* (M15) to make a difference, which starts with them individually, or, as M25 and M16 explained, responsibility starts *"with the man in the mirror"*. Secondly, managers described a feeling of empowerment that came from individual actions contributing to something bigger. Of the 31 managers, seven talked about responsibility in this way. However, it is not clear whether feeling empowered through action is as positive as the managers in this study appeared to feel it was. Hamilton and Kasser (2009, p1) describe empowerment as a 'maladaptive coping strategy', where individuals believe that they are making a difference to climate change as a way of reducing the emotional impact and negative feelings of fear and guilt. As will be seen below, other 'maladaptive coping strategies' identified by Hamilton and Kasser (2009) are also recognised within other positions described by the managers in this study. For example, six managers

described explicitly how they 'did their bit' in order to avoid feelings of guilt as they did not want to feel they were making the effects of climate change worse. Crompton (2010) describes guilt in this sense as 'a kind of moral anxiety' (ibid, p28). Managers in this current study explained their desire to avoid harm to their own children's future as well as that of future generations and the environment more generally. Hamilton and Kasser (2009) may recognise this position as a 'Diversionary Strategy' where through engaging in minor behavioural change, it is possible to reduce feelings of guilt enough to feel absolved without doing more. In addition, three managers described how they would do their bit if there was something beneficial in it for them. It was argued by some that acting on climate change would take time because there was "*no immediate gratification*" (M18). This is an idea acknowledged by Whitmarsh (2005, p174), where she found that there needed to be direct benefits for individuals to want to act.

'Doing my bit' was used by six managers as a way of not doing a lot and where it was important that personal responsibility for acting on climate change could fit in with an "*easy*" and "*comfortable life*" (C1) because "*people are busy, they've got lots of other things to do*" (M16). Here managers described climate change as one of many concerns that they needed to think about, with other issues, particularly family and work, taking priority. This may emphasise the relative importance of Benevolence to managers where concern for others meant concern for the 'in-group'. While there was recognition of the importance of individual action, this was as long as it did not require too much time or commitment because: "*We follow the path of least resistance and if that path says somebody else can do it, we'll let somebody else do it: I do my bit*" (M9). In this way, 'doing my bit' was enough and managers needed to believe that it was someone else's responsibility to do more. The tendency for individuals to displace blame for climate change and therefore the responsibility to act on it to others is acknowledged by Crompton (2010, p30); Hamilton and Kasser (2009, p3);

Lorenzoni et al., 2007, p450); Whitmarsh (2009, p416; 2005, p174); and Stoll-Kleeman et al., 2001, p107).

Finally, managers described how trying to take personal action on climate change could also leave them feeling disempowered, "*alone*" (M23) and "*helpless*" (M19) and "*like a child*" (M19) against the enormity of the global changes that were needed to make a difference. Hamilton and Kasser (2009) may consider this to be the most helpful reaction because they describe how individuals need to get angry and depressed at the enormity of the problem and come to terms with that in order to start developing more 'Adaptive Coping Strategies' and re-orientating their needs towards greater social (or self-transcending) values (ibid, p7). In my findings, managers described how they did what they could but found it difficult to see how they were making any meaningful difference. This sense of helplessness was emphasised by the rapid economic growth seen to be taking place in India and China which, as Lawton explained, highlighted the "*total inadequacy of the modest changes we're making to lifestyles in the UK*". However, one way of viewing the enormity of climate change more positively was for managers to see responsibility for action in terms of 'components' (see Section 4.3.6) and this may reflect the adaptive coping strategy of 'problem solving' (Hamilton and Kasser, 2010, p7). In this, managers described how they were affecting change in the "*little bit of the world where I can make big changes*" (C4). This meant that climate change could be tackled better, if, instead of seeing the one concept, people addressed the aspects of it that meant the most to them. For example C7 argued that she did not feel that climate change per se was an issue she could do very much about but that she could "*help build towards good*" by getting involved with local food and congestion issues that were of concern to her.

Contrary to Whitmarsh (2005, p174) my findings showed no difference between how male and female managers viewed responsibility. Managers from both genders and demonstrating both forms of self-enhancing values (Achievement and Power) can be seen in Table 6.2

under each group of responses. However, this may suggest that there are nuances that need further investigation.

Table 6.2 Summary showing how managers described personal responsibility for acting on climate change

<p>I am empowered to act by feeling that I am doing my bit</p>	<p><i>"It's a personal sense that I think we can all make a difference and if we all made a little difference it would make a big difference" (M20).</i></p> <p>Also referred to by C3, M10, M12, M15, M16, M25.</p>
<p>I do my bit to avoid feeling guilty</p>	<p><i>"If it's going to go wrong, I don't want to add to that wrong, I don't want to contribute to it or feel that I've made matters worse. I can't cut down everything I do but I can do my bit and whatever I save then that's good" (M7).</i></p> <p>Also referred to by C1, C3, M10, M12, M21.</p>
<p>I'll do my bit if there's something in it for me</p>	<p><i>"For me personally, I'd like to do things for the environment as long as there's some sort of return for me. I'm very aware that my next company car will be something that gives less emissions, less taxes, better fuel economy" (M21).</i></p> <p>Also referred to by M18, M22.</p>
<p>I can do a bit but I'm too busy to do more</p>	<p><i>"Everyone is beginning to do their bit but don't ask them to do too much because we've got a million and one other things to do as well" (M22).</i></p> <p>Also referred to by C1, M1, M5, M9, M16, M21, M22, M23.</p>

<p>My bit will never be enough</p>	<p><i>“What difference does it make if I leave the lights on? It is such an overwhelming concept people feel powerless. We’re approaching 7 billion, what’s little old me going to do about global warming?” (M5).</i></p> <p>Also referred to by C1, M10, M17, M19, M23, M26.</p>
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6.2.3 Responsibility of others

In addition to describing their own sense of individual responsibility to act on climate change, managers also talked about how other businesses, government and other nations needed to respond. While there is a strong theme within the literature that describes ‘externalising’ (Lorenzoni et al., 2007, p450) or ‘displacing’ (Whitmarsh, 2005, p174) responsibility on to ‘out groups’ (Crompton, 2010, p25), my findings also suggest that managers saw genuine complexity that would need actors at different levels to respond. For example, six managers described this in terms of a challenging and complex international arena where a number of other actors needed to work together as well as individuals in the UK. These actors included environmentalists along with big business and governments of both developed and developing nations. The USA and China were not drawn on as ‘scapegoats’ (as found by Hamilton and Kasser, 2009, p4) but as powerful players that were both part of the problem and the solution. Complexity included the self-interest of both developed and developing nations and whether anyone had the right to tell developing countries, which included China, that they could not industrialise or exploit the natural resources within their political boundaries.

While responsibility could be described as a complex global problem, seven managers argued that there was a clear role for action by both small businesses like themselves and big businesses. It was believed that there was already a lot that small businesses were and could

be doing. The motivation behind SMEs taking responsibility was described in two ways: firstly because, *“we want to do our bit and we think it makes a difference”* (M20) and secondly because, *“we get tied up in the global economy”* (M9). The business greening actions that SMEs delivered will be explored in section 6.5. In terms of a role for big business, it was clear that this was seen as part of their corporate social responsibility with *“the environment, society and climate change all kept together as part of the same thing”* (M16). Responsibility was seen in three ways: firstly, responsibility to lead by example gave smaller companies the opportunity to learn about new approaches: *“If Marks and Spencer’s did this, maybe Spar would do that, then the little corner shop would do it”* (M12). Secondly, big businesses were seen to have a responsibility to invest in a different future. Managers believed that where technological solutions already existed, big businesses had a responsibility to use them in order that the technology spread and developed. Thirdly, managers described how big business had a responsibility not to exploit climate change by over-charging for environmentally-friendly solutions. Section 5.2.7 explored what managers said about what they saw as profiteering.

Seven managers described how the responsibility of big businesses and government was interlinked and complicated by the relationships between them. Predominantly, the inter-relationship between big business and government was described in terms of government needing to take the lead in setting a clear framework within which businesses could act *“on a level playing field”* (C1). Clear regulations were seen as key to controlling behaviour with a focus on *“making every company think about environmental issues”* (M22), setting *“rigorous targets”* (M20) and *“giving credit where credit is due and penalising those that don’t try”* (M19). The need to *“facilitate this idea with real things, touchable stuff that can be done”* (M18) was countered by disappointment at lost opportunities, such as the closure of UK wind turbine manufacturing plant because of lack of investment. It was suggested that more business support should be directed towards encouraging investment by both large and small

businesses and that match funding business investments would have a “*long term impact on the environment*” (M12). Government could encourage local authorities to adopt projects that were proven to engage communities so that ideas could be spread. It was seen that government had a clear responsibility to lead by example and to ensure that local authorities did so at a community level.

Table 6.3 Summary showing how managers believed others had a part to play in taking responsibility for acting on climate change

<p>Responsibility lies in the international arena with many players</p>	<p><i>“Who are we in the developed world to tell developing countries like Brazil that it can’t use the land covered by its rainforest unless we’re going to compensate them for having all this abundance that the rest of the world’s not allowing them to tap into. I think environmentalists have got a real challenge” (M17).</i></p> <p>Also referred to by C7, M7, M9, M16, M20.</p>
<p>There is a role for both small and big businesses</p>	<p><i>“Every time we build something new, every engineer, every builder should be thinking, how can I make this more efficient, how can I make this better” (M22).</i></p> <p>Also referred to by M9, M12, M16, M18, M20.</p>
<p>The relationship between big business and government is central</p>	<p><i>“I’m not saying that we’re generally corrupt in the UK but I just think the government needs to be less corrupted, or influenced by those really big players. It’s a bit tail wagging dog at times and I question who is setting the agenda and why” (C7).</i></p> <p>Also referred to by C1, M12, M18, M19, M20, M22.</p>

6.2.4 Section summary

In summary, the findings in this section described a sense of responsibility towards climate change that involved other agencies but that started with managers, personally, and was described in terms of 'doing my bit'. In this, managers drew on emotional language to describe how they were empowered by the idea of acting with others to contribute towards making a big difference. They could see that change was happening and were happy to be part of that. For other managers, 'doing my bit' was to avoid feelings of guilt and irresponsibility with the motivation described as not wanting to make a bad situation worse, particularly for their children. While there was some suggestion that in order to 'do my bit' there needed to be personal benefit, it was also questioned whether personal action could make a difference to climate change as a global issue. Here, managers overcame feelings of powerlessness by committing to change the bit of the world over which they had control and by focusing on local environmental issues that contributed to climate change. Managers also described how they believed that other players took responsibility for acting on climate. It was seen that there was a much greater role for big business, government and local authorities to achieve this and that doing so would enable small businesses to do more. The idea of leading by example was a consistent theme. In addition, it was felt by the managers that government needed to set clearer frameworks and use all its powers to ensure that this both encouraged and delivered real change.

6.3 Linking climate change with business greening

The purpose of this research is to understand how SME managers make sense of climate change; how this relates to how they make sense of business greening and what this may mean for how they engage with pro-environmental actions (see section 1.7). Understanding how managers see the link between the two ideas of climate change and business greening is an important bridge that moves forward from the existing literature which found that SME managers considered climate change an abstract concept with little practical relevance for

them (e.g. Williamson et al., 2006). This section will look explicitly at how managers understood the link between climate change and business greening. The following sections move on to consider how a values framework can help make sense of managers' environmental actions and motivations.

6.3.1 How managers understood climate change in the context of business greening

This section will look at how managers made sense of climate change in relation to ideas about business greening. The findings suggest three points: firstly, managers situated their business greening in the context of bigger ideas including climate change or aspects of climate change, such as energy security; secondly, managers demonstrated that the language of climate change, for example carbon reduction, is talked about within business and that this has helped to raise business greening up the agenda; and thirdly, four managers explicitly argued that climate change was a clear motivation for their business greening.

The findings come from the section of the interview schedule where managers talked about their motivations for business greening and where 23 managers made explicit reference to climate change. This is particularly significant because it was before they were prompted to discuss their ideas about climate change. While there is some suggestion in the literature that climate change may act as a focus for SMEs regarding environmental issues (Wright et al., 2012; Baden, 2010; Revell et al., 2010) this is an area that is generally under-researched. The findings in this section show that climate change can indeed act as a focus for business greening and is no longer considered to be an 'abstract' idea of little relevance (Purvis, 2000).

6.3.2 Business greening is in the context of bigger ideas

Firstly, in linking business greening to bigger ideas, Suzanne suggested that sustainability was an '*easier*' concept to understand than climate change because as she used something,

she would seek to replace it (see Sections 5.2.2 and 5.2.5). However, for M1 and M25, climate change and sustainability were linked because going beyond sustainability meant using more resources which contributed to global warming and climate change. This was described as a business issue because it could threaten the long-term ability of business to succeed by undermining the security of resources and increasing economic instability within supply chains.

Climate change could also motivate business greening as a personal issue where managers drew on self-transcending values to extend their concern to others. For example, where managers believed that climate change could threaten their ability to continue to run their businesses, they were motivated by feelings of responsibility to protect staff livelihoods and family security (see section 4.4.5). Along with access to resources, managers were also concerned about energy security and described this in connection with climate change. They expressed concerns about how to secure long-term energy needs as well as how to improve energy efficiency to make existing resources last longer (see section 5.2.4). However, seeing business greening within the context of climate change did not necessarily lead to actions consistent with reducing carbon emissions beyond saving money or lead to actions that would improve the resilience of the business to adapt. This will be discussed in section 6.4. Interestingly, half of the 14 managers linking climate change to their business approach to greening in this way were female. This may support the findings of Braun (2010) who, in finding stronger environmental attitudes within female entrepreneurs, suggested that women may be more engaged with environmental issues at work than men.

6.3.3 The language of climate change is part of business

Managers also drew on phrases that they seemed to understand as associated with climate change such as carbon foot-printing, carbon trading, carbon reduction, global warming and carbon neutral in describing their approach to, and reasons for, business greening. Some of

these ideas were expressed with derision: as M13 explained, for example, for SMEs carbon foot-printing was a *'load of nonsense: if I make my plants more efficient then I am doing everything that anyone else can do'*. It was suggested that climate change was becoming part of everyday business thinking and this was supported by managers who described how climate change had helped to move greening up the business agenda. Managers described having a heightened awareness of green issues due to talk about climate change and to climate change being seen to be increasingly important within their particular industry or profession (see section 6.2.1). For C1, this meant that her green task team had been able to move greening forward faster, while for M23 climate change had had inspired greener product design.

6.3.4 *Climate change is a minority agenda*

Finally, four managers explained that while climate change was a clear aspect of their approach to business greening, they believed they were still in a minority of companies doing so. Two of these managers were environmental champions and they expressed frustration that conversations were often limited, for example to energy efficiency, without seeing the bigger picture of climate change. M5 reflected these frustrations and argued that people she met were largely dismissive of climate change and failed to see that one cold winter did not mean that the earth was not experiencing global warming and the implications of that for her in terms of resources, energy and population.

Table 6.4 Summary showing how managers made sense of climate change in the context of business greening

Business greening is in the context of bigger ideas	<i>'I tell the employees that when we give our little talk about ISO14001 and the environmental management system, that we have an energy policy and it's important that we try to</i>
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	<p><i>save, you know, reduce the use of energy, in the context of global warming' (M1).</i></p> <p>Also referred to by C1, C3, C5, C7, C8, M7, M10, M11, M14, M20, M24, M25, M26.</p>
<p>The language of climate change is part of business</p>	<p><i>'If you spoke to me about environmental issues ten years ago maybe, we'd probably say we're not interested. We don't know if that's going to affect our business because people didn't really understand the implications of what was happening with global warming and the like...but I think these days, if you're blind to environmental issues then you're not very intelligent because everybody is now aware of what's happening in the world and starting to be more forward thinking' (M21).</i></p> <p>Also referred to by C1, C2, M1, M9, M10, M12, M13, M14, M15, M22, M23, M26.</p>
<p>Climate change is a minority agenda</p>	<p><i>'One of the main motivating factors for getting involved is my passion that we should emit less carbon ... but I realise that not everybody is motivated like that and I realised that if I was going to persuade our client I was going to have to use cost reasons' (C5).</i></p> <p>Also referred to by C7, M1, M5.</p>

6.4 Environmental actions within the business

Table 6.5 below summarises the actions that managers referred to in their descriptions of greening at work. The actions were offered by them and were unprompted beyond initially asking about what sort of environmental things they did (see Figure 3.3, Interview questions and additional prompts). In this way, the interview process did not interrogate managers in depth about their actions; instead managers were given the opportunity to talk about how they approached environmental issues in the business and what this meant to them (see Sections 3.3.3 and 3.3.5). This means that managers spoke about what was important to them so that the actions discussed in this section are a reflection of managers' values rather than an objective audit of behaviour. This is more consistent with a social constructionist approach. The findings may address debates within the literature regarding the value-action-gap (e.g. Cassells and Lewis, 2011), where managers are perceived to espouse environmental values that are not supported by the actions they undertake (see Section 2.4.3). By looking at how the actions are described, it is clear that managers draw on different values to understand what different actions mean to them. Table 6.5 serves to illustrate that the range of actions undertaken by business managers varied from business to business. It also suggests that some actions, such as energy reduction, are carried out more often than other actions, such as water reduction. However, it is likely that some actions were not mentioned even though they were carried out; for example, legislative compliance was only mentioned by four managers. It is through the discussion that follows that the importance of exploring what each action means in practice will be understood.

Table 6.5 Summary of business greening actions offered by managers

Key to table:

Current actions Actions want to do Actions would struggle to do

The horizontal axis shows manager by code number. For reference to manager gender and values, see Table 4.1. The vertical axis refers to the actions that managers described.

	C1	C2	C3	C4	C5	C6	C7	C8	M1	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26
Audit (incl Action Plan)																															
Awards																															
Board Engagement																															
Carbon Reduction																															
Carbon Offsetting																															
Champion appointed																															
Customer Engagement																															
Green Policy																															
EMS																															
Employee Engagement																															
Energy Reduction																															
Environment Stakeholder																															
Investment technology																															
Legislative Compliance																															
Product Offering																															
Pollution Reduction																															
Purchasing																															
Recycling																															
Re-use																															
Service offering																															
Supplier Engagement																															
Transport																															
Waste Reduction																															
Water Reduction																															

6.4.1 Individual case studies

To begin with, this section will return to the case studies of Lawton and Caroline to compare how they described the environmental actions they undertook in their businesses. From Table 6.5, it can be seen that both these managers could 'tick' similar green boxes with their actions. Travel will be used as one example of an action for direct comparison between them.

Lawton

In terms of self-enhancing values, Lawton was motivated by Achievement. His language demonstrated a need to have an impact and influence others as well as to be capable, competent, efficient and effective. In terms of greening actions this meant that Lawton looked to make continual change and improvement. He could see that some activities were financially beneficial but he determined to go beyond saving money to deliver deeper actions. Using travel as an example, he was happy to do what he could to encourage people to change their habits, especially on travel to and from the office where he had understood many other businesses did not consider it their responsibility to influence how their people came to work. He personally did not believe in air travel as a sustainable mode of transport and avoided using a car on his own. He said that the company had a very effective travel plan that encouraged the use of meetings via video links. They also operated a cycle loan scheme and 22 (out of 60) staff had already bought bikes. They ran cycle-to-work, as well as bus-to-work days and in particular tried to encourage staff that had not yet used the bus by providing specific travel advice on alternative routes and methods. Lawton felt he was open to new ideas from outside the business and would look to use those ideas to continuously improve and develop what they did.

Caroline

It was the Power values of social power, public image, authority and wealth that defined Caroline's self-enhancing needs. In terms of business greening, she said it was important for her to keep her finger on the pulse because, in the current economic recession, people were increasingly taking note of the environment and the cost savings that could be made. She could see that she was saving money by using less energy, which meant lower carbon emissions. She described this as working backwards for the environment. She had transformed her business approach after attending a meeting with the Institute of Directors at a time when she was applying for Investors in People. She realised that there were opportunities for recognition by incorporating environmental and social responsibility actions into their procedures. In terms of transport, as an example, she spoke proudly of how they had changed their customer support processes to allow engineers to access clients' ICT remotely in order to resolve ICT problems. She said that this was because it enabled them to deal with queries faster so that staff could be more productive. This also meant that they reduced company overheads by saving wear and tear on their vehicles, saved fuel and dead time travelling. This approach had helped to increase their margins by nearly ten per cent on the previous year. She did not like to speak for her staff but she was sure they all supported her environmental ethos. Caroline used the environment as a unique selling point for her business and so it was important to her that she could reasonably support this approach with her actions. However, the actions that she committed to were limited to those that had direct financial benefit to her. She chose not to go further than these actions, even where the potential environmental opportunities were pointed out to her as part of a free environmental audit, unless there was financial help to assist her.

Comparing how Lawton and Caroline approached the issue of transport within their business is intended to demonstrate how environmental actions can have different meanings to different individuals. The role of values in helping managers to frame actions as well as

motivate their approach to action is clearly implied and will be explored within Sections 6.4.2 and 6.5.

6.4.2 How environmental actions were described by other managers

This section will explore the differences in depth and understanding between how managers described some of the business greening actions that they undertook. For example, while Suzanne refers to wanting to recycle and M26 said that he did recycle, there was an enormous difference between these two actions in practice. Suzanne wanted to establish an onsite recycling centre in order to reduce transport movements between their clients and landfill which would increase recycling opportunities and reduce both waste to landfill and transport impacts. In contrast, M26 meant that they recycled office paper through a local charity that collected it from them free of charge.

Indeed, M26 can be drawn on to illustrate how relatively easy it can be for managers to tick a significant number of 'green boxes' with easy actions. Drawing on Power values, he confidently talked about energy reduction, carbon reduction and working with external charities to carbon offset but he did not measure his carbon footprint and so was unaware of the impact of those actions. Rather than monitoring for energy usage, the only measurements he made were for cost reductions. He also described how his employees were engaged with the company's green policy and that the office manager purchased recycled paper and ink cartridges and recycled them again after use. This is compared to M12; although ticking fewer boxes and not using the same confident carbon reduction language as M26, motivated by Achievement, M12 had invested time and money into working with partners to redesign his packaging in order to reduce transport impacts and enable it to be recyclable by the end user. Bringing environment into purchasing for him meant that he was committed to buying locally and working with local partners and was both open, and proactive, to continuous improvement.

The six managers who had carried out an environmental audit also had an environmental action plan. They described how this gave them a management tool for measuring and addressing environmental issues in a systematic manner. The audits had all been carried out with external support from publically funded projects (such as the Carbon Trust) and each manager had found this support useful. For example, M11 described how just in terms of transport, an environmental audit meant they were empowered to collect data relating to their travel and to make decisions that could visibly reduce their carbon emissions, such as investing in lower emission vehicles. Only M1 referred to having an accredited Environmental Management System (EMS) as well as an action plan but, in a similar way, was able to describe how it helped him to continuously monitor and improve his environmental approach. In particular, he was able to demonstrate carbon reduction and the reduction of environmental impacts as well as cost savings. In contrast, M11 saw the cost of implementing and maintaining an EMS as a concern. This highlights how awareness of potential actions does not necessarily translate to immediate action: although M11 was positive about the benefits of an EMS, he would wait for customers to require it from him before responding. In this, M11 demonstrated how it would only be when the potential action fitted with his value (in this case the Power values of competitiveness and wealth) that he would be motivated to act. This means that understanding managers' motivations through the values they are drawing on is important to engaging them with pro-environmental actions. This will be explored in section 6.5.

6.4.3 Section summary

The actions described show both the range of potential ways that managers could engage with the environment as well as the differences in approach that could be adopted within each single idea. Understanding the role of values in how managers engaged with environmental actions helps to make sense of these differences. For example, while energy efficiency can

be a simple idea (such as switching off lights, C4) to some, for others it can mean investing in LED lighting (M1) or a whole change to processes such as installation of combined heat and power units (Suzanne). It is clear that those managers who had accessed free external support found using the action plan, based on the business audit, a useful management tool but that alone did not mean that managers would invest in actions that did not fit with their personal motivations. From the many ideas and approaches captured in Table 6.5, it would seem beneficial for SME managers to share experiences through peer support. However, it is also clear that for some managers (e.g. M16, M17 and M18) there is still dismissal of even the simplest environmental actions and opportunities for business support organisations to frame actions in terms that would appeal best to them.

6.5 Motivations for business greening

Building on the findings of Chapter 4, this section will explore how managers described their motivations for business greening and the values they appeared to draw on. Using the Schwartz Values System (SVS) as a framework to look at this data (see Section 3.3.4 and Appendix 3), it can be seen that each manager was drawing on a group of ideas that reflected the values that were important to them. Section 6.5.1 will firstly look at how managers described their motivations for greening when they appeared to be drawing on the two self-enhancing values of Power and Achievement. Section 6.5.2 will go on to look at the role of other values within the conservation and self-transcending groups. The section will show how values provide insight into the motivations towards greening. In particular, this section will contribute towards understanding how the business case for greening, the so-called win-win (section 2.3) is understood and how compliance with legislation (section 2.2) motivates some, but not all, managers to act. The notion of environmental and ethical reasons for greening will be understood through self-transcending values.

6.5.1 Power values as a motivation for business greening

To illustrate how managers draw on more than one value at a time and also on a number of different marker values, this section will start by looking at the case study of Robert. In Robert's case, the values are social power, public image and wealth within Power, along with Conformity to social expectations and norms.

Case Study: Robert

Robert's concern about his public image was reflected in his motivations towards business greening. He described how he had invested in a new, more energy efficient heating and ventilating system, dismissing the cost as of limited concern although mentioning it several times during the interview; this implied that his ability to invest, or the cost itself, was indeed important to him. While he said he had made this investment for 'genuine reasons', which he described as partly technical and partly environmental, he was concerned that other people might perceive his approach to greening as being 'just a veneer to win business'. He said he despised other companies that did this and did not want to be seen to be like them. However on being prompted further, Robert explained that he had replaced the heating and ventilating system because the poor energy rating would put potential buyers off investing in his property, suggesting social status and wealth as motivations for him. Robert had also committed his company to a number of government-supported carbon reduction projects. He said that he was disappointed that, despite the high profile of some of these initiatives, they had so far proved of limited benefit to him; which suggested that he had hoped his own profile would have been raised through association with them (he was particularly critical of Caroline for achieving this, see section 4.2).

In addition to drawing on a need to preserve his public image and improve his social power and wealth through improved business competitiveness, Robert also showed the importance of Conformity values to him in his motivations for business greening. In addition to only

replacing the heating and ventilating system when they '*had to*', they had an environmental policy and action plan only because they had been '*obliged to*' in order to meet the '*requirements*' of a project they were involved with. They were also involved with carbon offsetting through a local tree-planting project and Robert explained that they had 16 trees planted 'somewhere almost out of guilt'. He also described feeling guilty during the interview for not doing more. Robert blamed himself and argued that the environment was important but not urgent. While Robert said that he would like to do more, he said that he did not see the environment as a major commercial consideration for the companies that he did business with and that limited the importance of greening to him.

Robert's environmental champion (C2) was also interviewed for this research. She explained that she believed Robert had only invested in the heating and ventilating system because he had been supported financially with the cost through a financial grant from a local carbon reduction project. She felt that Robert had only allocated a carbon champion in order to comply with the project funding requirements. She explained that when Robert first announced that the company would be going down the 'green' route, the reaction of her colleagues was that it would be a waste of time and just another of Robert's 'flash in the pan', money-making ideas. The only other action referred to by Robert was the completion of a company environmental audit. C2 explained that this had been carried out free of charge as a requirement of the project with which they were involved. Of the actions identified through this audit, only limited energy saving actions such as switching off computers and recycling paper through a free scheme had been encouraged. A specific proposal to upgrade a new onsite extension to higher environmental standards had been dismissed by Robert due to the high cost.

This case study shows how Robert was motivated in his approach to business greening through the need to maintain his social power, preserve his public image and improve wealth,

material possessions and money. He was also motivated by Conformity and the need to meet obligations. The actions that Robert carried out were a reflection of those motivations.

How motivations related to Power values were described by other managers

Similar to Robert, the ten managers who drew on Power values referred to cost savings and improving competitiveness as motivations for business greening. The language reflects the motivations framed within the idea of win-win (e.g. Vickers et al., 2009; see section 2.3) that encourages managers to save money and save the planet. Some researchers (e.g. Revell, 2007) have found that SME managers can be sceptical of the win-win idea. Understanding that the language of win-win frames environmental engagement in terms of Power can help to explain this. Firstly, managers drawing on Power do not hear the second half of the message, 'to save the Planet' as environmental protection is motivated from within Universalism values and none of the managers motivated by Power were also motivated by Universalism. To them, the win-win message was one of increasing wealth and, by being seen to help the environment, increasing competitiveness (social power). This contradiction helps to make sense of the observation by Boiral et al. (2012) and Cassells and Lewis (2011) that win-win does not seem to motivate managers yet most actions tend to be cost saving (see section 2.3.2). Secondly, managers drawing on Achievement were seen to be uncomfortable with the emphasis on cost and competitive advantage and dismissive of the win-win message.

These findings show that with Power as a motivation, managers could be *"very keen on how we can drive down costs and get a quick bang for our buck"* (M21), but this needed to be without financial investment. So where managers were aware of potential actions, they were only carried out if they did not require investment in terms of time or finance. For example, recycling ink cartridges was an idea that M21 was *"quite happy to go along with because it's not a big overhead"*. This was explained by M17, M21, M25 and M26 in terms of how, *"It's me and my business. Everything I buy it's my money and I regard it as my money"*. As money is

“hard earned” (M26), this meant that managers would ask of environmental initiatives *“how does it benefit me, what does it put on my bottom line?”* (M26).

Being motivated by how other people saw them could be reflected in wanting to be seen to be green in the eyes of customers in order to win more business. In addition to references that drew on these values as motivations, other managers drawing on Achievement values criticised these Power-based motivations as shallow and ineffective and this scepticism may be that reported by previous researchers as a response towards win-win messages (e.g. Vickers et al., 2009; Revell et al, 2010). These managers argued that the environment should not be a competitive issue as that undermined the ability to share ideas and make genuine improvements. Here, managers also expressed concern that selling greening on saving money would mean that improvements would stop as soon as the financial savings ceased.

Table 6.6: Summary showing how managers drew on power values as a motivation for business greening

	Competitiveness and cost savings as a motivation for greening	Competitiveness and cost savings <u>criticised</u> as a motivation for greening
Social Power	<i>“From a commercial point of view, we recognise there’s a movement coming, that green will grow, and we need to be there and be offering products that have value and fit with that model. There’s no point in doing it unless you add commercial value; you’re in it to</i>	<i>“I don’t regard it as a competitive issue. I just think you’ve got to do your own thing and if there’s any recognition that comes as a result, well that’s nice but that’s not the reason you are doing it; you’re not doing it as a marketing exercise although if there’s a spin off and it</i>

	<p><i>make money at the end of the day” (M23).</i></p> <p>Also referred to by C4, M13, M14, M15, M17, M25, M26.</p>	<p><i>brings us some added value, fine, we’ll take it” (M22).</i></p> <p>Also referred to by C5.</p>
Public Image	<p><i>“One of the incentives for this for me was actually to make myself look good, so I don’t end up on the dole queue. We’ve also been looking at is having a tree logo on our boxes so we could actually go for looking to appear environmentally friendly and start boasting about it...” (C4).</i></p> <p>Also referred to by M11, M14, M15, M17, M23, M25, M26.</p>	<p><i>“You’ve got to be cynical of companies who get on the bandwagon and make a lot of noise about what they’re doing when they were not doing anything before; it’s all peacock feathers and show” (M16).</i></p> <p>Also referred to by M6, M8.</p>
Authority, the right to lead and command	<p><i>“The ground source heat pump project gave me the chance to make decisions and be in the lead again. And I thought, well this is great so I drew up the plans and I spoke to planning and English Heritage and I decided that we needed a local archaeologist and I did it all” (M13).</i></p> <p>Also referred to by M15, M17.</p>	

Wealth, material possessions, money	<p><i>"I tend to use both sides of a piece of paper not because I want to save the planet but because everything costs money. If you went at me with a green microscope, you could say I was ticking a few boxes but I'm not ticking them for environmental reasons, I'm ticking them for economic reasons" (M17).</i></p> <p>Also referred to by C4, M11, M14, M15, M17, M21, M23, M25, M26.</p>	<p><i>"The trouble with only selling it on the financial side is if the price of energy were to drop, people wouldn't have the same impetus. They can also save money just by renegotiating energy contracts without making any real environmental changes. So that's where the incentive for energy efficiency really gets into quite deep trouble" (M7).</i></p> <p>Also referred to by C7, M5.</p>
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6.5.2 Achievement values as a motivation for business greening

The 21 managers who drew on Achievement values were motivated to act on business greening rather differently to the ten motivated by Power. Rather than talking about cost savings and competitiveness, they described wanting to make a difference through influencing others; to improve business controls through better efficiency; to reduce wastefulness and to achieve goals through better controls. The case study of Suzanne can help to illustrate how the marker values for Achievement were expressed in terms of being motivated towards business greening.

Case study: Suzanne

Suzanne expressed Achievement values through her need to be capable, competent, effective and efficient. She was also goal orientated and determined to succeed. In addition to Achievement, Suzanne was motivated by Tradition to think about maintaining her father's

ethos towards quality and sustainability. Suzanne recognised challenges with the inefficiency of recycling and transport and, since investing in more efficient transport, moved on to explore how they could sort materials in a more efficient way that would enable the company to be less environmentally harmful. This was described as a big project where they would develop an onsite recycling unit so that, over the long term, they could reduce inefficiencies associated with unnecessary journeys and improve environmental impact, time and cost efficiencies. Suzanne also invested in a Talbot Wood Burner, so that they could reuse appropriate materials to generate all their own heat, and a rainwater capture system so that they could use rainwater in all their treatment processes. Rainwater was an improvement to the treatment process with cost reductions seen as a by-product of quality and efficiency improvements. Suzanne also supported research with her suppliers to reduce the toxicity of the treatment products they used. She invested in more efficient (in terms of energy, time and effectiveness) ICT equipment and agreed a two-year investment for the replacement of inefficient lighting. Suzanne expressed a need for help to achieve a formal environmental management system. She felt it was inevitable that, increasingly, their environmental policy would not be enough for them to demonstrate their competency and continue working with customers. By thinking longer term about her approach to business greening and seeing this as integral to the efficient operation of the company, Suzanne was able to see the cost of addressing environmental inefficiency as an investment in the future.

How motivations related to Achievement values were described by other managers

Managers motivated by Achievement thought beyond short-term cost savings to think about reducing wastefulness, demonstrating confidence in their business through being capable and working with their supply chain to influence others and to show just what SMEs could do. Commercial considerations were still part of their attention but managers believed there was a balance between cost, efficiency and the environment and that in the long-term the environmentally efficient option would be the best business option too. Wastefulness included

reducing unnecessary costs but also included reducing wastefulness in terms of time inefficiencies, process inefficiencies and resource inefficiencies. Managers also described working with their supply chains to show what it was possible for SMEs to achieve and they were happy to use requests from customers for information as an opportunity to demonstrate, or improve, robustness.

In addition, eleven of the managers drawing on Achievement values reflected on earlier business decisions to make sense of them in terms of more current environmental issues. For example, M16 described how he had invested in special glass for his previous London office even though it cost £8,000 per pane. He explained that, in those days they did not think about energy in the same way but now he could see they had been great from an energy saving point of view. At the time, the consideration had been about staff comfort and safety. Faced with a similar need to replace office windows today, he added the need to reduce carbon emissions from wasted energy into the reasons for wanting to replace them. However, there was also the suggestion that some other managers, who did not really consider the environment, could retrofit actions to 'work backwards for the environment'. In other words, there was an assertion that some managers were claiming environmental benefits in retrospect where the motivations had been to save money or improve competitiveness and the environmental benefit had been a coincidental, secondary benefit. This is an idea that reflects Cassells and Lewis's (2011) observation that environmental actions could be a *'fortuitous by-product rather than the intended outcome'* (ibid, p198). There was an inherent criticism of this approach that implied insincerity and shallowness.

Table 6.7: Summary showing how managers drew on Achievement values as a motivation for business greening

<p>Influential, having an impact</p>	<p><i>"We did all we could, we made conscious choices on everything we did. I suppose we wanted to influence others through here and so we tried to do what we could as a business to involve ourselves in sustainable energy things" (M19).</i></p> <p>Also referred to by C1, C3, C5, C7, M5, M6, M7, M8, M9, M10, M16, M20, M22.</p>
<p>Successful, achieving goals</p>	<p><i>"Starting off and saying we want 5% renewable content then leads us into a future where we can have higher renewable content. It's good to achieve this in steps, it's Kaizan, it's 14001; continuous improvement in attainable steps" (M1).</i></p> <p>Also referred to by C3, C6, M6, M18, M24.</p>
<p>Capable, competent, effective, efficient</p>	<p><i>"We decided to go with Mercedes rather than Ford: they are a lot more expensive but it wasn't a cost, it was investment. Being green isn't expensive, it doesn't have to cost more in the long term. We always weigh up cost with efficiencies with carbon footprint in order to come to the best solution" (M9).</i></p> <p>Also referred to by C2, C3, C6, M1, M7, M8, M10, M12, M16, M20, M22, M24.</p>

6.5.3 Conservation values as a motivation to business greening

Apart from Suzanne (M24), and her need to maintain her father's business traditions, no other manager drew on Tradition as a motivation for business greening. Security was an important conservation value related to how a number of managers understood climate change but it was Conformity that was drawn on in terms of a motivation for business greening (see section 4.6). In particular, it was the language of the Conformity marker value of 'obedience, dutiful, meeting obligations' that managers used and they drew on it to describe the need to meet external legal and customer requirements. An example of how Robert drew on Conformity, along with Power values, is described on in Section 6.5.1 above. The prevalence of Conformity may reflect how environmental issues have been subject to legislation and why compliance with legislation is noted as an important motivation for greening (e.g. Gadenne, 2009; Contantinos et al., 2010; Babiak and Trendafilova, 2011; Hofmann et al., 2012). However, the observation that only nine out of 31 managers (see Table 4.1) were motivated by this may also reflect the limited success of legislation as a motivation observed by Petts et al. (1998) and Fineman (2007) as well as acknowledge that most SME owner-managers go into business to be independent (e.g. Gray, 2002) not to comply with others.

Of the managers who made reference to environmental legislation as a motivation, there was some confusion as to what they needed to do, reflecting Petts et al. (1998) idea of 'vulnerable compliance' (section 2.2.1), where managers want to do the right thing but do so rather by luck than judgement. For example, M16 suggested they had an environmental policy because it was legally required, which is not correct. Other references to legal requirements were more company-specific. For example, M1 had been affected by the REACH Regulations and the End of Life Vehicle Directive and M21 suggested that a specific forthcoming legal requirement was motivating them to work towards a new approach to product tracking.

Managers motivated by Conformity also described a need to meet external supply chain requirements and references were also made to *“being sold the idea of getting some formal qualification”* (M19) in order to meet future supply chain requirements. Here references were made to being told by organisations such as the Chamber of Commerce that environmental accreditation to ISO 14001 would be important for their competitiveness but their experience with other systems did not support this. For example, despite being *“scare-mongered”* into implementing the quality standard ISO 9000, M23 had never actually been asked to demonstrate it. He explained that accreditation to the environmental standard ISO14001 would be a big, expensive project and the only reason for doing so would be to tender for work in the public sector.

Table 6.8 Summary showing how managers drew on conformity values as a motivation for business greening

Obedience, dutiful, meeting obligations	<p><i>“There needs to be a driver there for us to go in that direction, a business driver or a legal driver. At the moment we’re working on a bar coding system for our products because we know that is going to have to be in place in four or five years, it will be a requirement”</i> (M21).</p> <p><i>“If you deal with supermarkets now, you are audited on your environmental credentials because they don’t want the Daily Mail on their backs. So it’s not necessarily caring for the environment or the world, whether they do or they don’t they have to now”</i> (M23).</p> <p>Also referred to by M1, M5, M14, M16, M19, M20, M24.</p>
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6.5.4 Self-transcending values as a motivation to business greening

The managers who drew on Universalism and Benevolence in their understanding of climate change (section 4.4) were not necessarily motivated to green their business in the same way. However, a number of managers argued that they were motivated to green their business for what they described as ethical or personal reasons and the managers that did this drew on self-transcending values to explain why. In particular, they drew on the Universalism value to protect the environment. This made business greening personal and may improve understanding of what some authors (e.g. Beauregard, 2010) may refer to as individual ethical motivations towards greening (see section 2.4.2). All of the managers drawing on these values also drew on Achievement as a self-enhancing value and none drew on Power values.

For example, fifteen managers described how they believed that they, as individuals, played a key role in the approach to greening taken by their company. This may or may not be due to personal green convictions, but could also reflect wider ideas about business and personal ethics and who they perceived themselves and their businesses to be. For example, Lawton drew on Benevolence values to describe an ethical perspective, where business greening was something that was seen to fit with the ethics of the business and its people, and was *'the right thing to do'*. The ethics described were not overtly 'green' but drew on ideas of social responsibility, particularly to the local community, and not wanting to damage the environment. There was also a commercial sense that it was right to think about the long-term in order to be clear about what the business stood for.

In addition to greening because it fitted with the purpose of the business, managers acknowledged that they, personally, were the driver for greening because it linked with their own personal purpose and beliefs. For these managers, there could also be a sense of a personal *'environmental conscience'* (M12), where they described acting on business

greening not to solve a business problem or to achieve business benefit but because it was something that was important to them. Here *'passion and conviction'* (C5) for the environment were seen as coming from a *'personal point of view'* (M7). This was described as a *'fundamental driver'* (C1) or *'main motivation for getting involved'* (C5) and was linked by managers to clear environmental beliefs, such as the belief that humankind should emit less carbon, stop wrecking such a beautiful planet or look to live within more sustainable limits.

Table 6.9 Summary showing how managers drew on self-transcending values as a motivation for business greening

Universalism: Protecting the environment	<i>'One of the main motivating factors for getting involved is my passion that we should emit less carbon and try not to use so much energy and other resources. That's what I feel strongly about and so I'm highly motivated to minimise the impact we have on the environment'</i> (M7). Also referred to by C1, M1, M10, M12.
Benevolence: Loyal, faithful to my friends, group	<i>'It's so enjoyable to get to know your producers, know the people who collects the eggs and you talk to the butchers and they know their product but then you get to know them, as people, and you've got a community and so it's much...rather than just the soulless experience of going to the cash and carry, which is so depressing, you've got a community working together and you are minimising your impact on the environment too'</i> (M5). Also referred to by C1, M6, M8, M10, M19, M20.
Honest,	<i>'Trust is a massive, massive issue. It's taken nine months of going</i>

genuine, sincere	<i>backwards and forwards with XX but we've got a solution now that will reduce our packaging waste and we are confident that they can also help us think about what else we can do better' (M12).</i> Also referred to by C1, M1, M7, M9, M10, M20.
Helpful, working for the welfare of others	<i>'It certainly started with things that were tangible to me; my favourite places that I had named, different woods and things disappearing and I felt I wanted to help others to enjoy them. This green champion role has helped me to make sure that I can do at least something small but positive because I have a daughter who is going to grow up in this world, so I want to make it as nice for her as possible' (C3).</i> Also referred to by C2, C5, M5, M6, M8, M10, M20.
Responsible, dependable, reliable	<i>'When you're running a small business, you've got to hand it on to someone and ideally it would be in a better position when I do. This is very much a driver of sustainability in how the business is run. This business has to sustain 60 staff and it's important that it continues to do that' (M20).</i> Also referred to by C2, C3, M1, M10, M19.

6.5.5 Section summary

In this section it is seen that the interplay of motivations referred to by Vickers et al.(2009) is not simply a case of external, internal and personal reasons: all motivations are personal because they are driven by values. For example, it was seen that compliance with external legislative drivers was important to managers motivated by Conformity values, in particular

with a need for obedience and dutifulness. It was also seen from the case studies of Robert, Caroline, Suzanne and Lawton that each individual manager can draw on a mix of values to describe a mix of motivations to green. All managers drew on one of the two self-enhancing values of Power and Achievement along with reference to self-transcending and/or Conformity values. Managers drawing on Power were motivated to green their business in different ways to those drawing on Achievement; where the former focused on saving money and being seen to be green to improve competitiveness, those managers motivated by Achievement wanted to influence others by working with customers and employees to engage them with continuous environmental improvement. They needed to be capable and efficient and this could mean improving efficiency throughout the business to go beyond quick financial savings to think longer-term about the impact of decisions. Universalism values were most clearly reflected by managers wanting to protect the environment. In addition, managers drew on the full range of Benevolence values to show how business greening could be motivated by a need to have a sense of community where trust, responsibility and helping others was important.

6.6 Chapter summary

This chapter has looked at how managers enacted their understanding of climate change through concerns about responsibility and business greening. The chapter began by exploring the notion of responsibility for climate change. The findings reflected many of the ideas seen in the literature whereby lay individuals avoid culpability in order to manage emotions and protect their self-identity. However, the managers in this study also showed how they believed they could take responsibility at both a personal and professional level. They also recognised the importance of larger businesses and the UK government in setting an example and showing what could be done.

The chapter went on to look at how managers used climate change as a focus for greening in their business and how climate change, and the language of climate change, was seen to have helped to push greening up the business agenda. Environmental actions reflected what was important for managers and varied widely both in terms of the actions undertaken and how different actions were understood. Managers motivated by Power were seen to focus on short-term cost saving actions whereas managers motivated by Achievement were seen to take a longer-term, more in-depth view. The chapter concluded by exploring the motivations of managers to engage with business greening. Again, the difference between managers drawing on Power and Achievement were clear, with the win-win business case being clearly reflected in the ideas of managers drawing on Power. The conservation value of Conformity, along with a number of self-transcending values, was shown to add understanding to business greening debates concerning the interplay of manager motivations.

Chapter 7: Concluding discussion and implications

7.1 Introduction

This study has explored managerial engagement with climate change. The aim of the study has been to understand how SME managers make sense of climate change; how this relates to how they make sense of business greening and what this may mean for how they engage with pro-environmental actions (section 1.6). Climate change is understood by a consensus of climate scientists to have far-reaching consequences for business, society and the natural environment. While SME managers are important actors in addressing climate change due to their contribution to greenhouse gas emissions, previous research has suggested that they are reluctant to engage with environmental initiatives, and climate change in particular is seen as too abstract an idea to motivate action (e.g. Purvis, 2000). Although climate change is acknowledged as a natural physical phenomenon, it is also understood to be a socially constructed idea (Hulme, 2009) so that understanding SME manager sensemaking will be important to engaging them with pro-environmental actions.

This research has addressed three main questions that were identified in section 1.6 as follows:

1. How do SME managers make sense of the complex problem of climate change?

Table 5.1 provided an overview of what managers in this research said climate change meant to them. Managers constructed climate change in a number of different ways and five themes were identified. These are explored in Chapter 5 and summarised as follows:

- Climate change is about what can be experienced locally, notably changing weather and seeing places at risk;

- Climate change is to do with energy;
- Climate change is to do with our use of natural resources;
- The cause and effects of climate change are unclear;
- Climate change as an idea is seen to be undermined by confusion, vested interests, profiteering and inconsistency.

2. What business greening behaviour have they adopted in their businesses and what are their motivations for doing so?

Table 6.5 provided a summary of the business greening actions that managers described. Chapter 6 explored the environmental actions that managers carried out in their business along with their motivations for business greening. It was seen that managers described a number of different actions that were consistent with the different values that motivated them.

3. What values do they draw on to articulate their sense of climate change and their approach to business greening?

- Table 4.1 summarised the values that managers drew on in the interview narratives. Chapter 4 explored the type and nature of the values in depth to understand how values helped managers shape and articulate their sensemaking of climate change and approach to business greening.

In addressing these three questions, it is proposed that this thesis makes a unique contribution to knowledge. Firstly, I have focused on the role of values within sensemaking and demonstrated how individuals draw on different values to filter and motivate their business engagement with climate change. In addition, by focusing on how SME managers appear to make sense of climate change, this research contributes directly to moving the business greening literature forward in two ways: to explore the little understood 'human factor' (Beauregard, 2010) and secondly, to understand how managers appear to construct

and bridge the distinct but related ideas of climate change and business greening. In this way, this thesis presents a new approach within the business greening literature that offers considerable insight into how managers understand and act on environmental issues.

In this thesis, I build on Hulme's (2009) assertion that climate change is a socially constructed and contested idea (see section 5.4) by adding empirical evidence to support his theoretical constructs. In addition, through this thesis I demonstrate how a particular group of actors (SME managers) construct climate change as an idea. The findings also support Hulme (2009) in seeing climate change as an 'unfolding idea' and demonstrate this by showing how the understanding of the seven managers who took part in the long-term aspect of this study (see section 3.3.1) evolved over time and could reflect changing debates and issues.

However, although their stories changed between the pilot research and the current research, the managers still drew on the same values. For example, M5 was partly motivated by Benevolence in seeing climate change as an issue for her local community. She described how when we had first met (in 2009) that she had wanted to be part of a sustainable community; by 2011 she had set up strong community links that met that need and now felt a greater sense of urgency to help them to develop resilience by transitioning to a low carbon town.

In this chapter, the context of the research is summarised in section 7.2 below. In section 7.3 the research findings are summarised and discussed. In section 7.4 some limitations of the research are acknowledged. In Section 7.5 the contribution of the thesis is described in terms of the implications for research, policy and practice. Finally, Section 7.6 provides an overall conclusion to the chapter.

7.2 Summary of the research context

This research is positioned within the context of the ecological modernisation of industry, which is seen to be the dominant paradigm framing European policies concerning the greening of business (e.g. Weale, 1992; Revell, 2007; see section 1.3). Although SMEs are different from large businesses (see section 1.4), such an ecological modernisation framing by EU and UK government policymakers means that the same 'win-win' promise of financial savings and improved competitiveness is used to engage companies regardless of size. This is an important context that is reflected in previous SME research into pro-environmental behaviour where the focus has been on identifying the drivers and barriers to pro-environmental behaviour (see section 2.1).

Ecological modernisation is important for another reason; although SME managers are found to be sceptical of the win-win framing (e.g. Lewis and Cassells, 2011; Spence, 2007; Simpson et al., 2004) and policy initiatives often have limited success (see section 2.3.2), the same language is used by policy makers to engage SMEs with climate change. This means that policymakers have used the same win-win language through the waste minimisation programmes of the 1990s to the resource efficiency clubs of the mid-2000s to the current focus on carbon reduction (see section 1.2), while still presenting greening as a business opportunity for SMEs. While recent research has shown that environmental issues have risen up the business agenda (Hofmann et al., 2012; see section 1.1), addressing efficiency savings alone are unlikely to deliver the required 80% reductions in carbon needed for a European transition to a low carbon future (Scott et al. 2009, p13; Revell, 2007, p119; and see section 2.4.1)

Existing research on SME engagement with climate change is a small and emerging field compared with the larger green business literature. It is also dominated by a positivist approach at the level of the firm, largely ignoring the crucial role of the SME manager as

strategic leader. By this I mean that the research approach has been based largely on quantitative data with a lesser concern for understanding the issues identified at an in-depth, individual level. In this thesis, this is argued to be a significant gap in that it overlooks how the individual responsible for strategy in an SME (who may or may not be the original owner) might draw on their own personal values in their approach to business. In addition, where previous research acknowledges managers' attitudes and values towards the environment as an important factor, it does not explore what those values are. Understanding the importance of different individual motivations towards business greening is identified as a key research gap (e.g. Vickers et al., 2009). Beauregard (2010) calls this gap the 'human factor' and argues that it is a crucial missing link in our understanding of how business engages with environmental issues.

In this thesis I have argued that the need to understand the 'human factor' (Beauregard, 2010) calls for a qualitative research design which allows the researcher to focus on how individual managers make sense of the issues salient to them. I drew on the sensemaking ideas of Weick (1995) to appreciate how managers might construct ideas in retrospect that were plausible to them and which supported their self-identity within a social context. As outlined in section 3.3.5, Weick (1995) argues that self-identity is at the root of sensemaking and Hitlin (2003, p119) proposes that values are at the core of self-identity. On this basis, it seems clear that for a deeper understanding of how SME managers engage with environmental issues at work an understanding of values should add an important contribution to this area. Indeed Onkila (2009) argues that research on values is needed for a deeper understanding of how lay individuals connect with the environment. It is developing this approach within the context of business greening that is one of the key contributions of this research. Within psychology, values are recognised as basic human needs that filter information in order to motivate action (Schwartz, 1994). In this way, values are seen to be at the root of human attitudes, beliefs, norms and behaviour (Rokeach, 1968; Thøgersen and

Grunert-Beckmann, 1997). Similarly to Miroso et al. (2013), this research explores the understanding of a particular population of lay individuals through the values that they drew on in describing their understanding of climate change.

7.3 Summary and discussion of research findings

7.3.1 Using the SVS to understand values in sensemaking

In this research, the Schwartz Value System (SVS) was used to enable an exploration of managers' values. This was within a qualitative approach that utilised the narrative analysis of interview transcripts. The individual level *marker* values from the SVS (for example, efficient, wealth, family) were used as a means of identifying when an individual was drawing on their values when talking about business greening and climate change. The individual level values (e.g. Achievement, Power, Benevolence) were used to show how a consistent pattern of values built up throughout the narrative of each manager's interview (see Appendix 3 for a full description on the SVS).

Through using the SVS, I was able to demonstrate that managers drew on a number of different marker values. This means that managers understood climate change in a number of different ways and all held more than one construction of climate change simultaneously. For some managers this meant that climate change was understood as a multifaceted idea while, for others, this emphasised disagreement and confusion. In this thesis, I argue that this will have direct implications for simplistic policy messages that draw predominately on one value.

The Schwartz Circumplex Model (Figure 3.4) was also found to be useful in understanding how different values can be visualised in relation to each other and how they either complement or conflict. For example, the individual level values of Power and Universalism

are shown in opposition to each other in the Schwartz Circumplex Model. As my findings show, managers who appeared to be drawing on Power did not draw on Universalism in how they framed either climate change or business greening. This may help to explain previous research that finds some managers sceptical of win-win messages that motivate Power while also seeking to motivate environmental protection – a Universalism value (i.e. ‘save money; save the planet’). Crompton (2010) theoretically argues that stimulating self-enhancing values is likely to undermine opposing self-transcending values and the ability of lay individuals to engage with bigger-than-self problems. This current study adds empirical evidence to support that argument within an SME context.

All the managers in this study drew on one of the two self-enhancing values of Power or Achievement. However, only nine out of twenty male and one out of eleven female managers drew on Power in how they understood and framed climate change. Understanding that not all SME managers are motivated by the maximisation of short term profit has important implications for the success of win-win messages (see section 1.7), which are framed in terms of the Power values of wealth, competitiveness, social power and public image.

7.3.2 How managers made sense of climate change

Table 7.1 below summarises how managers drew on either Power or Achievement along with other values in their sensemaking of climate change. The values are not mutually exclusive. For example, the number of instances refers to the number of managers drawing on Power and Benevolence, some of whom may also draw on Power and Conservation. The table serves three purposes: Firstly to summarise how different values may be combined. For example managers drew on Power and Benevolence but not Power and Universalism. Secondly, the table is used to show how managers drawing on different combinations of values made sense of climate change and offers a summarised, and simplified, expression of what a manager constructing climate change through these values might be heard to say.

Thirdly, the implications for how managers may act on climate change and approach greening with their businesses are summarised.

Table 7.1 Summary showing how different combinations of values link with managers sensemaking of climate change

Values demonstrated	Number of instances	Summarised construction of climate change	Responsibility for acting on climate change	Approach to action through business greening
Power	2	Climate change is dismissed as irrelevant	It is a minority of managers who are disengaged. This is not the norm.	Limited engagement with short term cost savings
+ Benevolence	6	Climate change is confusing but something should be done, by someone, because it will affect my children and my business	Managers may be engaged with climate change through concern for their family / local area / staff	Focus on short term savings / staff wellbeing
+Universalism	0	The wider implications of climate change are not recognised as a personal concern	Managers do not see wider environmental and social implications as relevant	Managers are not motivated by greening messages that call for them to 'save the planet'
+ Benevolence and Universalism	0			
+ Conservation	6	Climate change is a threat to family' security. There are also concerns for	Managers see a need for Government to take a strong	Managers will comply with legal / supply chain

		energy and national security.	lead on developing long term frameworks	requirements
+ Self Direction	3	Managers do not want to be told what to think about climate change	Managers are sceptical of the human role in causing climate change	Managers need to recognise for themselves that greening is more than a fashion
Achievement				
+ Benevolence	5	Climate change will adversely affect my family, staff and local community / environment through extreme weather and access to natural resources	Managers may be engaged with climate change through concern for their family / local area / staff	Managers may access local business networks for support and to help their peers
+Universalism	5	Climate change is an ethical issue affecting a wide range of environmental and social issues	Managers recognise wider environmental and social implications as relevant and want to make a difference	Managers may be environmental leaders, going beyond quick wins to develop innovative long term solutions
+ Benevolence and Universalism	7	Climate change is a concern for both its direct impact on family, community and staff as well as its wider environmental and	Managers have the ability to think globally and act locally, with a sense of personal responsibility for	Managers have the ability to engage others with big issues at the local and global level

		social implications	action	
+ Conservation	7	Climate change threatens family and the stability of society, nationally and globally.	Managers recognise they can improve the efficiency of the components of climate change they affect	Managers improve resource efficiency and environmental management through continual improvement
+ Self Direction	6	Climate change stimulates a curiosity about the world as is a set of complex, interconnected problems that need creative solutions	Managers have the potential to stimulate innovative climate solutions for society	Managers may be early adopters and supporters of innovative approaches

While managers drawing on Power could also draw on Benevolence, managers drawing on Achievement values were able to draw on both Benevolence and Universalism in how they made sense of climate change. This suggests that all managers were meeting both a self-enhancing and a self-transcending need but differed in how far their concern extended. Managers drawing on Achievement were able to extend their concern beyond their immediate group to see climate change as an issue of social justice and environmental protection, as well as being concerned about their family, community and staff, for example. This is important because the group that managers felt concern for was reflected in why managers believed climate change mattered to them.

In addition to the self-enhancing / self transcending axis, the openness to change-conservation axis of the Schwartz Circumplex Model was also important for understanding how managers engaged with climate change. The conservation values of Security and

Tradition were shown to help managers frame their understanding of climate change as a risk, with Conformity being important to business greening (see section 4.5).

Although managers made sense of climate change in different ways, the different frames they used were consistent with the values that they drew upon (see section 5.2.8). This means that managers provided an insight into what was important for them and how climate change fitted with that and, by doing so, showed how the personal ethics and business ethics of SME managers can be closely aligned (Werner, 2008; Jenkins, 2004; Spence, 1999).

From Table 7.1 and through reflecting on the four case studies of Robert, Caroline, Suzanne and Lawton it is possible to propose four tentative ideal types. Bruun (2007, p208-210) explains how Max Weber (1864-1920) proposed the ideal type as a tool in social science to enable mental images to be constructed from abstract ideas. In this way, the ideal types described do not claim to be perfectly representative of all types of individual manager. Instead, the four types are a way of making sense of the findings in this research based on the values that managers drew upon in making sense of climate change. The four types are as follows: The Dinosaur, The Rhino, The Beaver and The Dolphin.

Table 7.2 Summary of ideal types

Proposed ideal type	Values drawn upon by type
The Dinosaur <ul style="list-style-type: none">• Largely dismissive of climate change• Does not like being told what to think or do• Does not like change• If climate change is such an urgent / important issue, the Government would be dealing with it• Reluctant response to environmental legislation	Power Security

<ul style="list-style-type: none"> • Legislation and especially climate change regulations are bureaucratic and pointless • The purpose of business is to produce wealth • Money saving ideas may be attractive but only if they do not require investment in money or time • Most likely to be male and aged over 50 	
<p>The Rhino</p> <ul style="list-style-type: none"> • Media reporting of climate change is confusing • It is easier to reject a human role than accept personal responsibility • Short sighted approaches protect self-identity • Climate change threatens a future where his family benefit from his hard work and determination • Win-win environmental ideas may be attractive in improving competitiveness and the working environment for his staff • Will comply with legal or supply chain requirements but will otherwise keep his head down until there is little choice but to move • Appreciates clear boundaries and frameworks within which he feels secure • Most likely to be male • There may be opportunities to engage the Rhino with beyond cost savings through concern for the family / staff / places of personal connection 	<p>Power Benevolence Security</p>
<p>The Beaver</p> <ul style="list-style-type: none"> • Nature's engineer looks to make a difference to the environment around him through addressing the components of climate change he can affect • Needs to ensure his family / community has the resources its needs • Efficiency is important; needs to do a good job and be recognised as competent by others 	<p>Achievement Benevolence Security Self-Direction</p>

<ul style="list-style-type: none"> • Works hard to make the most of appropriate resources in order to continually improve the business and processes within it • Resilient and hard working with a clear eye to the longer term • May enjoy working with others to learn and develop best practice • Critical of win-win messages; cost savings are a by-product of actions not the motivation • May be male or female • High proportion of female managers 	
<p>The Dolphin</p> <ul style="list-style-type: none"> • Understands climate change as an ethical issue • Concern for both those known to him and to other species and environments • Reflective and a good communicator • Needs to make a difference, especially where injustice is perceived • Strong cultural awareness, open and curious • Understands individual as well as collective responsibility • Challenges where own behaviour may be contributing to climate change • Enjoys the complexity and challenge of exploring solutions for carbon reduction in depth • Looks to lead others and inspire them to understand climate change and develop innovative solutions for the future • May be male or female • High proportion of female managers 	<p>Achievement Benevolence Universalism Self-Direction</p>

Table 7.2 summarises how the findings can be illustrated through four ideal types and allows for ready comparisons. *The Dinosaur* is visualised as an older male who is resistant to change and does not consider climate change to be of personal concern. *The Rhino* is also

likely to be male but may be younger. The Rhino takes a short-sighted approach to business greening by only responding when necessary or when there are clear and immediate financial savings. Climate change is rejected as a confusing and threatening idea. *The Beaver*, who may be male or female, uses climate change as an opportunity to make a difference and may be concerned about how family, colleagues and places may be affected. They may think more deeply about business greening and be critical of win-win messages and others who are motivated by financial savings. Like the Beaver, *the Dolphin*, sees business greening as a complex challenge with opportunities for continual improvement, innovation and peer learning. For the Dolphin, climate change is a complex ethical issue of global social and environmental concern.

The ideal types reflect the different value combinations and how the particular values are drawn on by managers in their sense making of climate change and business greening. The importance of self-identity is highlighted and, in particular, how concern for others is reflected in manager's motivations. For example, the social context can be seen to be important for all managers, although less explicitly for the Dinosaurs. In this Benevolence, and concern for family, staff and potentially local communities, is seen as a value that could potentially unite different types. The most significant difference is between Power-based types (Dinosaur and Rhino) and Achievement-based (Beaver and Dolphin): The Dinosaur and Rhino are largely disengaged from climate change and view business greening in terms of financial cost savings and conformity to legislation; the Beaver and Dolphin achieve financial savings as a by-product of actions carried out for other reasons and are more likely to embrace deeper, more complex environmental approaches to demonstrate their efficiency and effectiveness. The implications of these types for policy and practice are discussed in sections 7.5.2 and 5.5.3 respectively.

7.3.3 How climate change related to business greening

In addition to being an explicit motivation to engage with business greening, particularly for the Beaver and Dolphin types, the findings suggest that climate change has helped to move more general awareness of environmental issues up the business agenda (see section 6.3.1). This is an underexplored area of research and acts as an important bridge between the two concepts. Managers described how they were aware of climate change from a range of personal and professional sources and could recognise the relevance of climate change to their business situation. However, managers in this study also expressed a feeling that the majority of SME managers had yet to make this connection, so that those who did felt they were in the minority.

Managers from all ideal types could routinely use the language of climate change (e.g. carbon reduction, carbon foot-printing) in connection with their business in general as well as referring to situations where these ideas were used in a personal (community / family) sense. Climate change could thus act as a focus, in both a positive and negative sense, for environmental action within SMEs as indicated by Wright et al. (2012), Baden, (2010) and Revel et al. (2010). In this way, climate change has helped to focus attention within SMEs on environmental issues.

7.3.4 Engagement with pro-environmental actions

This study provides evidence that individuals can draw on a number of distinct values as they engage with climate change, and that different combinations of values can therefore act as precursors for the same pro-environmental behaviours. This finding, which is supported in a different context by another recent study (Miroso et al. 2011), may help to explain an apparent anomaly in the win-win literature (e.g. Lewis and Cassells, 2011 and see section 2.3.2) regarding managers who report that they are sceptical of financial motivations yet deliver environmental actions with financial benefits. Whether managers are motivated by

Power or Achievement, the environmental actions that are taken first may improve resource / carbon efficiency and so reduce energy and material costs.

This thesis also supports the finding by Miroso et al. (2013) that particular values may be seen as more helpful in engaging individuals with climate change. Notably, managers drawing on Achievement (The Beaver and Dolphin types) seemed to take a longer-term view of environmental actions than managers drawing on Power (Dinosaurs and Rhinos). Although cost saving actions may be enacted by any type first, managers drawing on Power stopped at financial savings whereas those drawing on Achievement often seemed to continue to deliver deeper, better connected, more creative approaches (see section 6.4.2). This has significant implications for the way in which SME environmental engagement is framed by business support organisations and government, as discussed below (see section 7.4.2). Managers drawing on Achievement were the only ones in this study who showed an ability to think beyond short-term financial savings and equate the environmental best option with the best business option in the long term. The 'long-term' was a recurring phrase of managers drawing on Achievement values. It was noted (section 6.4.2) that managers drawing on Power could be very effective in meeting the requirements of their supply chain by ticking questionnaires related to easy environmental actions. Indeed, managers drawing on Achievement could come across as less environmentally active because the depth of their actions was not captured.

7.4 Limitations of the study

All methodological choices limit what research can address. As a qualitative study, this research has explored how 31 SME managers in the East of England made sense of climate change. The research design placed an emphasis on interpretation which allowed investigation of individual level perspectives within a particular regional context. A qualitative approach means that the research is limited in terms of how the findings may be generalised

to the managers of SMEs in other UK and European regions. The focus was on owner / managers who ran independent small businesses regardless of industry sector. Managers came from businesses that were engaged in a wide range of activities and they drew on these different industrial contexts as part of their sense making. The study did not set out to make a formal comparison between industry sectors because the focus was on the individual. The sampling strategy was designed to yield insights into a rich variety of contexts, but as a consequence it is not possible to draw conclusions about the role that particular industry contexts play on managerial sense making about climate change. This is identified as an opportunity for further research in section 7.5.4 below. I did not control for firm size. The managers all came from companies that were relatively smaller SMEs and only nine would normally be classified as medium-sized firms (section 3.3.1). As a company grows in size and develops more formal structures, it could be that there are aspects of the firm that would be seen in managers' sense making. However, this thesis cannot comment on the role of firm size. Finally, I did not include an objective measure of values in my research that would have allowed me to compare my interpretive findings with managers' espoused values, perhaps through a secondary questionnaire. In a similar way, the focus on personal understanding does not compare this with managers' public persona; how they interrelate with peers; or how they promote their company regarding climate change.

7.5 Implications

7.5.1 Implications for research

Empirical

An in-depth study that focused on the role of values was found to be central to understanding how SME managers made sense of climate change. This means that research on business greening, especially in the context of climate change, needs to recognise the importance of the individual and embrace complexity. This encourages research that moves beyond

assessing how far different policy instruments may drive behaviour at the level of the firm to focus on the currently still under-researched 'human factor' (Beauregard, 2010).

With SMEs being acknowledged as important actors in the transition to a low carbon future, it is important that the implications of these findings are explored in other business and geographical contexts. Far from seeing climate change as an abstract concept of little relevance to them (Purvis et al., 2000; Crichton 2009, see section 2.5.4), research needs to catch up with the changing ways that SME managers engage with climate change. Climate change has pushed greening up the business agenda such that it may no longer be fair to refer to SMEs as resistant (Tilley, 1999). Understanding how managers are motivated in their engagement needs to enable business support organisations, policy makers and individuals at work to have the opportunity to maximise their commitment and engage others in change.

Research also needs to acknowledge how easily managers' engagement with climate change can be undermined by negativity, disempowerment, contradiction and confusion. In particular, assumptions about motivations based on Power values can undermine engagement and, seeing other actors engage on the basis of such values, can discourage commitment. A more explicit longitudinal study could help researchers understand how sensemaking cues challenge particular framings and what this means for the underlying values that constructions are framed within.

Methodological

The Schwartz Value System (SVS) was found to be a useful tool for identifying and mapping individual values in a qualitative approach. This follows recent work by Miroso et al. (2013) who explore energy use behaviour in lay individuals using the SVS within a qualitative approach (see section 2.4.6). Contrary to much previous research on lay responses to climate change, this thesis focuses on SME managers and is not limited to energy use

behaviour. The use of narrative analysis to explore values is in the tradition of Rokeach's (1968) early work but has received limited prior use otherwise. In a field of values research that takes a predominantly positivist approach, only the small mixed methods studies by Enz (1988) regarding organisational power have included a qualitative approach before.

The individual level **marker** values may be particularly useful in helping researchers to recognise when and how an individual is drawing on values in their narrative. The individual level values are important in seeing the pattern of values on which individuals are drawing. Both axes of the Schwartz Circumplex Model were helpful, and qualitative research using the SVS should recognise that individuals draw on a number of different values simultaneously.

This use of the SVS points towards a different approach to understanding how SME managers engage with climate change. The thesis supports an interpretive approach to exploring how managers understand climate change from their own perspective. The emphasis on earlier positivist approaches in green business research has identified the role of the manager as potentially important in understanding SME motivations to engage with pro-environmental behaviour. The findings within this thesis may encourage the use of values in a qualitative research approach to understand the in-depth meaning that managers create.

Theoretical

This research has focused on the role of values in sensemaking at an individual level within a small business context. In this, values were shown to be central to sensemaking by underpinning the seven qualities identified by Weick (1995). In addition to self-identity being seen to be at the root of sensemaking (Weick, 1995) and values to be at the core of self-identity Hitlin (2003, p119, see section 7.2), values were seen to filter how managers understood information and the information sources they acknowledged. This may have implications for the social nature of sensemaking where family and peers were closely

identified with and found to reinforce existing beliefs about climate change. In addition, managers showed a need to make sense of climate change at a social level, whereby they could see how those they were concerned about may be affected. The plausibility of climate change as a social construction was seen in how managers framed ideas depending on the values that motivated them. This means that new ways of thinking about climate change will only be heard if the idea is consistent with existing values.

The role of values in self-identity is an emerging area of research that is being used to encourage campaigning organisations to reframe their climate change messages to lay audiences (e.g. Crompton, 2010; Crompton and Kasser, 2009; Hamilton and Kasser, 2009). It is clear from this thesis that there are opportunities for sensemaking theorists to explore the central role of values in identity, particularly with regard to climate change. This would lead to enhanced sensemaking theory and a stronger theoretical framework for practitioners.

7.5.2 Implications for policy

Within the context of ecological modernisation, the use of win-win messages have been used by policy makers to encourage voluntary engagement with business greening. However, this research has demonstrated the limitations of win-win, meaning that policy makers are now called upon to acknowledge the greater complexity with which managers make sense of climate change. Without evolving the messages and support to SMEs beyond win-win, the implications of this research are that policy would seem limited in moving SMEs towards a low carbon economy.

Acknowledging that policy makers are under resourced and need to maximise impact, the EU Directorate for Industry and Enterprise could commission their existing network of business support (providers and researchers) to explicitly explore how the findings in this study may be used to help design policy to better engage SMEs. This may help policy makers design more

effective regional programmes that will maximise the ability of SMEs to contribute towards the transition to a low carbon economy. By delivering deeper, more innovative pro-environmental approaches, policy makers may maximise their return on investment by also helping to deliver strong, healthy communities and green jobs. The importance of leading by example was shown to be a consistent theme (see section 6.2.4) and supported a need for policy makers to set clearer frameworks and use powers to ensure that they both encouraged and delivered real change.

The focus on win-win has been shown to over-simplify motivation and to send out a shallow, conflicting message that is easily ignored by those managers who are not motivated primarily by Power. Even if they are, the message ignores the other values that such managers also draw on. The implications of this to policy makers are that there is a need to explore how they can work with partners in a social marketing context, for example, to develop messages that, at the very least, associate Power with Security and Benevolence. Benevolence is found to be a particularly under-used value in this regard as it is the one value that was drawn on by the managers in this study motivated by both Power and Achievement (see table 7.2, for example). Managers motivated by Achievement could also be motivated by Security and Benevolence but here policy needs to acknowledge the potential to link managers into bigger issues based on Universalism values and facilitate opportunities for them to make a difference by engaging others. Providers and researchers could also be commissioned to work with social marketers to explore how managers, for example the Beaver and Dolphin-types (see section 7.3.2) who drew on Achievement and Self-Direction, could be activated to meet their creativity needs through developing innovative ways to addressing climate change. This work would need to explore how messages can be best framed and how they can be delivered in order to engage at an individual level.

While there are limits to what policy can achieve, how climate change is framed within ecological modernisation policy has been shown to both facilitate and limit the motivation of individuals to respond. By explicitly engaging with climate change as a value issue, policy makers could encourage individuals at all levels to address their own assumptions. In doing so, policy makers might help to encourage more open acknowledgement that climate change is a multi-faceted social idea as well as a physical phenomenon. This alone may help individuals to explore their own sensemaking and be motivated to act in a way that is congruent with their values. Facilitating a business discourse that actively discourages recognition of values in business greening makes the erroneous assumption that 'values' means environmental values only. This ignores the complex motivations explored in this thesis as to why managers may engage with climate change and limits the potential for their engagement.

7.5.3 Implications for practice

This section points towards a number of ways that managers within business could use the findings of this study. Firstly, supply chain managers within larger businesses may be in an ideal position to engage SMEs and build relationships with key suppliers at the individual, personal level. Doing so, and in acknowledging the different ways that managers make sense of climate change, may help them to engage SMEs in business greening. For example, rather than presenting SMEs with check lists of actions; compelling them to achieve environmental compliance or promoting financial cost savings, supply chain managers might benefit from understanding the four ideal types (see Table 7.2) and what may make climate change important to the managers they are looking to motivate. SME managers may use a similar approach to engaging their Board and / or staff with environmental initiatives.

Managers, local authorities, business support organisations and others may also use the findings of this study to explore ways that they can reframe climate change in order to

maximise engagement by SME managers. Understanding the four ideal types, for example (Table 7.2), and the potential for reframing ideas in terms of values other than simply Power, may help to maximise engagement with local initiatives. Similarly, working with the values that managers have to understand how they may see climate change increases the potential for dialogue and understanding.

Some of the implications described for practice have been explored through two seminars with Bedfordshire Green Business Network (GBN). Further research and exploration through publically funded business support projects would enable the implications for practice to be explored in depth.

The first seminar was designed to encourage managers to think about what climate change meant for their approach to business greening. Assumptions about climate change based on a win-win framing were made explicit before those ideas were reframed into language which drew on Achievement values. This helped managers to think about climate change in a way that framed the reduction of carbon emissions into a broader efficiency approach based on long-term resilience and making a difference through conversations with their supply chain, peers and staff. Feedback from the 30 managers attending suggested that, for many, this was a completely new way of thinking about how they could engage with climate change. It also helped them to see the bigger picture and where individual greening actions fitted into a strategic plan. The approach helped them to see where else they could focus their attention in order to tackle climate change with actions throughout the organisations in short, medium and longer term plans. The approach needs to be explored in greater depth to understand how it can be used to engage managers beyond Achievement and to help managers draw on a wider mix of values in order for climate change to be embedded in their values.

A second seminar with GBN, engaged a largely different group of 30 managers with thinking about how they could use values to engage staff with their environmental agendas. The purpose of the seminar was to help managers to understand why an appeal to staff to engage on the basis of win-win might be limited in its effectiveness and went on to explore the different ways in which individuals were motivated by their values to engage with climate change. The feedback was very positive and a second, longer session has been requested by GBN that will help managers use the SVS to recognise the values that the key individuals they are looking to engage are drawing on.

The two GBN seminars support the potential for an explicit values-based approach to engaging managers and staff with climate change.

7.5.4 Questions for future research

Building on the findings of this thesis and the implications for research, policy and practice, this section suggests a number of areas for future research.

1. Given the focus on the individual manager, how can the scope of future study be extended beyond SME managers to include the management team, the wider workplace and complex inter-firm networks? Could group interviews as well as personal interviews allow differences between the personal and public persona of different levels of management to be explored? How do the interactions between different team members help to shape a company understanding of climate change? How could the context of industry sector affect sensemaking?
2. Given that the scope of the study focused on SMEs based in the East of England, how can this be extended to understand the importance of place in how managers make sense of climate change? Do managers elsewhere in the UK and Europe draw on similar values and what does this mean for how they construct climate change?

3. Given the focus on SME managers, can larger companies use a values approach to support their SME supply chain to go beyond quick wins to engage with deeper, longer-term actions?
4. Are the theoretical findings of this research applicable to lay individuals within a non-work setting? Do individuals elsewhere draw on similar values in how they understand climate change? How do their constructions of climate change differ from those of SME managers? Do lay individuals, without a leadership role at work, have a different sense of responsibility towards acting on climate change?
5. Can the focus of the research move from SMEs to consider how managers within larger companies draw on their values to make sense of climate change? In particular, is there a difference regarding the importance of Power and Achievement and open-conservation values where potential managers at different levels have different opportunities to enact their values? Are the four ideal types recognised within larger company settings?
6. How can business support organisations be supported to move beyond the win-win rhetoric that they are familiar with to engage with their own values and help managers to understand climate change in ways that will engage them with deeper actions?
7. Given the significance of Achievement values and the apparent importance of this value for women, how can the significance of Achievement values in women be explored and compared with the role of this value in men?
8. Given the importance of a childhood connection with nature, what does climate change mean for how the current generation of young people are connecting with the environment? How can organisations (and parents) be supported to help young people and young entrepreneurs value the environment and develop innovative solutions in the context of climate change?
9. Given the potential to reframe the way that SME managers think about climate change, how could a social marketing perspective facilitate a deeper values-based approach to

engaging SMEs with climate change? Can the four ideal types be used as a tool for reframing climate change to facilitate action?

10. Given the importance of Benevolence values to managers drawing on both forms of self enhancing values, could future research explore how climate change could be framed to stimulate this value and facilitate a greater sense of responsibility and engagement?

7.6 Final words

In conclusion, to fully engage SME managers with business greening, policy makers need to take a more sophisticated approach to explicitly engaging with values. The current win-win rhetoric has been shown to be over simplistic and to give conflicting messages. Win-win therefore fails to maximise the potential of SMEs to contribute to the transition to a low carbon economy, at a time when it is more critical than ever that all opportunities for carbon reduction and climate resilience are embraced.

The language of climate change has become part of everyday language in SMEs. This is important and needs to be built upon to help normalise climate action by small businesses. However, how that language is understood has been shown to be very different depending on how individuals draw on their personal values in their sense making of climate change. The individual; their sense of self-identity, social influences, sense of responsibility and motivations to act need to be taken into account by researchers and policy makers if more sophisticated, personal commitment is to be achieved. Understanding managers in terms of the proposed four ideal types may be a starting point towards this.

Finally, the Schwartz Value System (SVS) has been shown to be a useful tool in exploring how managers make sense of the complex and socially constructed concept of climate change. The focus on the 'human factor' (Beauregard, 2010) has revealed how managers draw on their personal values in their sense making as well as how this model may be used to engage managers with their values. At the very least, the two GBN Seminars (see section 7.5.3) point towards using the SVS in a way that increases individual self awareness and challenges managers to reflect on their own sense making.

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Appendix 1

Copy of consent letter approved by Open University Ethics Committee

Consent to Involvement in Post Graduate Research Project

Dear

Thank you for agreeing to take part in the research I am carrying out as part of my PhD in Management & Business. I am looking at the role of managers' sensemaking of climate change in the enactment of green business actions – or, as I prefer to call it – 'SMEs and Climate Change: The Human Factor'! The work builds on a small pilot study (2008-9) to look at a range of environmental behaviours and attitudes.

Your input into the research will be kept completely anonymous. There will be nothing in the research to identify the ideas / thoughts you express as coming from you / your business. The digital audio recording I make of our meeting will be transcribed and you are welcome to see a summary of our discussions before I delete the recording. If at any point you would like to stop the meeting or choose not to answer a question or to ask for the recorder to be switched off, you may do so.

You are also very welcome to read a draft version of the final research dissertation and offer additional ideas into the work. My intention is to disseminate the findings from the research in the form of academic and / or practice-based papers. Should you wish to be identified (in order to promote your best practice) you will need to advise me so in writing, otherwise your contribution will continue to be kept anonymous.

If you would like to discuss this interview or my research with anyone else, my lead supervisor is Dr Anja Schaefer. She can be contacted at a.schaefer@open.ac.uk or 01908 654705.

Your time and support is very much appreciated. Thank you.

With best regards,

Sarah Williams

I,

Of

Agree to take part in the research outlined above.

Signed

Date

Appendix 2

Example of initial sensemaking-based coding table, partially completed for M25

M 25		Self	Business	Greening Role	Environment / Climate Change
	Identity	<p>My name is XX the director of YY services ltd.</p> <p>I used to subcontract</p> <p>The companies I used to subcontract for didn't want to know, they wouldn't help them (the patients)</p> <p>I had a good working relationship with them</p> <p>I rent stair lifts..</p> <p>I started my company up for ethics not for money</p> <p>Sustainability to me as a company...</p> <p>Businessman and ethically thinking person in balance..</p>	<p>It's predominantly</p> <p>We do / our size / we also</p> <p>It's big business... now the companies I bought those machines from realise I was on to a goldmine and they now follow because its financial viable</p> <p>We come along..</p> <p>As a business, bearing in mind we're turning over, we're in excess of a third of a million a year, probably throw away(less than half a bag) ... that's it</p> <p>We've found even greater niches in the market and exploited them to a huge extent... you buy the machine for £600-700 and then rent it out ten times, that's a hell of a mark up. And a lot of people like the idea – we get people giving us the machines</p>		

			because they want to reuse them		
	Emotions		<p>It wasn't so much I thought oh I can get money out of this, what hacked me off was ...</p> <p>But for me it wasn't the financial side of it, I was just fed up with what I saw ..</p>	<p>To be honest I would be horrified if we now have to produce pieces of paper to say we put cardboard in a recycling centre</p> <p>Fitted roof spoilers of roof racks to cut down drag saving 5-6% fuel which is phenomenal (pleased / proud)</p> <p>we just don't want to see it go in to a landfill, it's such a waste its stupid (getting annoyed / animated as speaks)</p>	
	Values (retrospective, how formed)	<p>I say to people, it's God's world. If you save a tree from falling down, that's His tree., look after it. If you save a child from drowning, look after it.. it doesn't matter what you do... if you're doing it for good and you're trying to do and especially if you have a belief in God, is doing it for God, it's the same difference if you're helping a kid n Africa or a poor old dog that's dying in the street, it's the same, its doesn't</p>	<p>(fed up with) people getting ripped off</p> <p>....and I thought, well this is stupid somebody should .. deal with this</p> <p>Manager and senior engineer very much on board with the ideas and the whole concept of it and I knew them long before I started the business up and I headhunted them both. Not only are they friends of mine but also their idea and the way they do things is similar</p>	<p>Now that's not the reason why we done it (gets £100 for scrap) we just thought well this is stupid, we're putting into landfill when on the other side of the planet they want the metal</p> <p>That (home workshops) was to be fair...</p> <p>You've got be a bit of a nana to chuck metal away</p> <p>(Re scrap corner) it does two things, first we can get rid of it instantly, second he</p>	<p>The person you see in the morning is the person who's going to have the greatest effect on your life, now deal with it. If you want to change things, do something about it and you'd be surprised at how much you know, an effect that is... .. you've got to do something, you can't just let the world drift by</p>

	<p>make any difference. Your logic is you've got to do something and you've got to start somewhere..</p> <p>Belief (in God) is a strong part of me.</p> <p>I don't give a stuff, if you don't like what I say you can stick your fingers in your ears!</p> <p>To me, you don't stand behind a religion, you stand in front of it</p> <p>its no good making money if you trash the planet and at the same time, lets be brutally honest, if you don't make money you cant put dinner on the table and if you do make enough money you can do something with it, and what you do with it, to me that makes a difference.</p> <p>you've got to be the person blazing a trail through the forest bec if you go first others will follow</p>	<p>I set up the business to help people</p> <p>Which is what my biz s set up for.. I do voluntary work out in Africa and I've got land out there and I knew if the biz was a success it would pay me to go out there and do that work</p> <p>Firm but fair.. run a tight ship and the work will get done.. never ask anyone to do a job I can't lead</p> <p>How was Jesus with his Disciples, firm but fair, if they stepped out of line, he soon told them. Well there's my hero...</p> <p>Business should be built on a Christian base, or if you're Muslim, a Muslim base; firm but fair, honesty, integrity, all of those virtues. People say you can't be honest in business. Rubbish!</p>	<p>(the guy that owns the yard) gets a pinky out of it because he takes it down and he gets the money for it</p> <p>and there's a nice little arrangement actually... (re plastic in boatyard skip) and I'm sure they would gladly give write us a form to say they take it bec what we do in return is give them loads of company pens and biscuits</p> <p>(re duty of care) to me that's a lot of wasted time and money, it's just the same difference, you taking stuff away</p> <p>All taken away properly</p> <p>The way we recycle is for ethics not for money</p> <p>we took it one step further decided to try to recycle...we just don't want to see it go in to a landfill, it's such a waste its stupid</p>	
Social	(Re President Lincoln-		I've been brought up to	

	(info / influences where from)	piece of string) – if you want to lead, you never push people, you pull them, and you stand out in front...		<p>recycle everything...14/15 recycle tin cans</p> <p>At first, much to my parents disdain... (but they) quickly clicked on</p> <p>We recycled everything, I think part of that was because money was tight and when money's tight you don't chuck stuff away but we took it one step further decided to try to recycle ...</p>	
	Ongoing (how changed / changing)				
	Plausibility (Constructions)	I'm not dealing with rainforest, I'm dealing n the sub-Saharan areas, a very different kettle of fish altogether	<p>I set up the biz to help people (but) if you look at the wider scheme of life, if you're helping people you're helping people, the planet is a village you can help everyone, and if you're helping someone ,its got to be doing good for the environment: help is help.</p> <p>Sustainability to me as a company that gets to a certain level and doesn't ant to grow any more... you don't end up with a Lear jet parked in your back garden really you get enough money to live on and you hold it at that level.</p>	<p>It doesn't take much more effort to recycle so there's that one. Another major concern is of course fuel prices,,,</p> <p>But that (home workshops) was to be fair slightly more monetary based than environment... but it has the spin off .. no excuse for being late</p>	<p>Why should the country move up (grow), it doesn't make sense to me, you end up using more resources... you're talking climate change, well they're interlinked, because as soon as you go beyond sustainability you're using more resources....</p> <p>Now whether its global warming or climate change, to be honest, I don't give a toot cahoot</p>

			<p>All these people that say grow, grow, grow, well if every company if every country grows, how do we live on the planet, we can't, so I do believe that continuous growth and sustainability are not, in their nature, compatible. And its something that I've come across because I could easily expanded and it was like no, we're at a sensible size.</p> <p>Economics, oh if the country is at zero then we're in recession, I think personally that's sustainability, if the country is at zero that's really where it should hold</p>		<p>because they're all big names. All I can see is that we're using up things faster than we should do</p> <p>I think the other thing is I think when they talk about global warming and increased carbon and increased this and that, then suddenly they start putting taxes on it and trying to make money out of it... I don't know, that's just my logic</p> <p>I think the climate is going to change, there's no question of it, it's a question of trying to be clever and trying to get one step ahead. Eg home insulation cool in summer</p> <p>I bought land (in Ghana) and turned it into a small plantation for three good reasons. Primarily it was my bit of anti global warming.</p> <p>I think there is a bit of hype from the government and</p>
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					<p>science, I think a of it is true. There are definitely problems out there, and we're causing it, full stop, you know and whether its climate change, I think, well that's irrelevant. What's relevant is that we are using resources faster than we can replace them and also the way we are doing things is harming the environment and we need to wake up and think about that.</p> <p>Yes someone in Africa is going to suffer more but that's the part of the world they live in, you know that's not social injustice as such, you've got trade rules that are heavily against Africa but that's not climate change, you know, that's a different issue altogether. And if you were to make those trade rules fairer, would it make any difference to climate change? I doubt it.</p> <p>Education makes a</p>
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					<p>difference to climate change and if you show people a way to make money without chopping down trees and killing animals, I hate to admit it humans are very greedy, very good at making money... and he'll look after it like a baby.</p>
	Cues / triggers (drivers)			<p>Legislation – (re waste / scrap) well nobody ever bothers to check on that</p> <p>(re duty of care) we don't come under that, I don't think, or if we do its only batteries</p>	<p>Travel. (London to cape town via Congo lost faith in those driving truck) at the same time I had a strong calling from God that if I got off the truck there would be work for me to do...I ended up listening to that call, hooking up with a missionary and then .. it snowballed from there.</p>
	Enactment	<p>(standing in front of religion) I will connect with people and spend a good 20 minutes talking about God and beliefs and to me it suddenly opens up a complete new door, you've been able to talk to this person, and literally you're ministering to</p>	<p>We can really keep machines going long beyond what the manufacturers say, two reasons, one because we look after them (and) we've got parts</p> <p>We kind of help out through the McMillan grant scheme.. by automatically giving a discount</p>		<p>Throw away half a black plastic bag per week ... everything recycled...wood, screw, nut and bolts, batteries, machine part stripped down and reused. Steel and aluminium sold</p> <p>Built home workshops</p>

		<p>them, at the point of their bereavement; you're allowing them to talk about their loved one dying.</p> <p>I will happily connect with any religion, you know, it's one God, full stop.</p>	<p>Putting into the greater community (ie schools & charities) connected to the company (through staff / kids)</p>		<p>for both engineers so do not need to travel into central workshop on quiet days</p> <p>Got all the guys to slow down a bit... Bought bigger vans so can load up for more jobs and reduce journey back to yard every day</p> <p>Fitted roof spoilers of roof racks to cut down drag saving 5-6% fuel (phenomenal)</p> <p>Plastic recycled via boat yard</p> <p>Waste paper / card via shopping centres / domestic recycling</p> <p>Reuse the stair lifts, strip down, rebuild</p> <p>(re plantation) you plant one acre of trees, that's a hell of a difference to that one acre and that stops soil erosion and everything else that goes with it. .. Second reason, the people who look after it now have a cash crop, mangos, which fruit in</p>
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					the dry season when they've got no money.. Third one is it's a tax dodge and at some point I'll be able to fly out there free of charge
	Responsibility	And if you're making good use of (money) then you will be blessed and make more of it but then you should be able to do more with it. God says that if you get a lot of money, He expects a lot more of you. So yes I'm doing quite well but now I need to do even more for Him. It doesn't give me any easy life it just makes it more complicated because there's more responsibility	... and I decided there's got to be a way to stop it and the only person I could see that would stop it was me If I don't run the biz right, Africa will suffer... Sue's going to suffer .. its got to be running right if one person going to let it down, to be honest, I'll get rid of them because I can' watch 17 people go under	We recycled everything, I think part of that was because money was tight and when money's tight you don't chuck stuff away but we took it one step further decided to try to recycle...	but that was a direct spin off for me reading about global warming and thinking, I've got to do something, and I don't care if it's a drop in the ocean, it's a drop in the right direction and that will do me. You can only do what you can do and you can't save the planet, but if everyone has the idea of trying to do something, it has a positive effect. We all live on the planet, you know, to me, if you see a problem you deal with it and its no good saying it's the government, it's the next person, yes it is the government, it is the next person but it's also you and I always liked what Michael Jackson used to say,

					<p>start with the man in the mirror.</p> <p>The person you see in the morning is the person who's going to have the greatest effect on you life, now deal with it. If you want to change things, do something about it and you'd be surprised at how much a know on effect that is.. .. you've got to do something, you can't just let the world drift by</p>
	Barriers				

Appendix 3

Table of values based on Schwartz (After Ralston et al., 2011)

Individual level higher order dimensions of the SVS									
Individualism <i>Indicates the extent to which the person looks after self-interests and perhaps those of nuclear family. It implies that society leave individuals a good deal of freedom to pursue their own interests</i>					Collectivism <i>Indicates the extent to which it is believed that people are born into groups and they are expected to look after the interest of their group. Group maybe the extended family, tribe or village implicit is that the freedom to pursue one's own goals is subservient to the goals of the group.</i>				
Self-enhancement <i>indicates the extent to which one is motivated to promote self-interest, even when they are potentially at the expense of others</i>			Openness to change <i>Indicates the extent to which a person is motivated to follow his/her own intellectual and emotional interests in unpredictable and uncertain ways</i>		Self- transcendence <i>Indicates the extent to which one is motivated to promote the welfare of others (both close friends and distant acquaintances) and nature.</i>			Conservation <i>Indicates the extent to which one is motivated to preserve the status quo and the certainty that it provides in relationships with others, institutions and traditions.</i>	
Individual level value sub dimensions									
<u>Power</u>	<u>Achievement</u>	<u>Hedonism</u>	<u>Stimulation</u>	<u>Self-direction</u>	<u>Universalism</u>	<u>Benevolence</u>	<u>Tradition</u>	<u>Conformity</u>	<u>Security</u>
<i>Motivational goal of power values is the attainment of social status and prestige, and the control and domination over people and</i>	<i>The primary goal is personal success through demonstrated competence. Competence is evaluated by the system or organisation in which the individual is located.</i>	<i>Motivational goal of this type of value is pleasure or sensuous gratification for oneself. The value type is derived from orgasmic needs and the</i>	<i>Goal is excitement, novelty and challenge in life. This value type is derived from the need for variety and stimulation to maintain an optimum level of</i>	<i>Goal is independent thought and action. Self-direction comes from the need for control and mastery along with the need for autonomy and</i>	<i>Motivational goal is the understanding, appreciation, tolerance, and protection of the welfare for all people and for nature</i>	<i>Motivational goal is preservation and enhancement of the welfare of people with whom one is in frequent contact. Concern defined more narrowly than universalism.</i>	<i>Goal of tradition values is respect, commitment and acceptance of the customs and ideas that one's culture or religion imposes on the individual. A traditional</i>	<i>Restraint of action, inclinations and impulses likely to upset or harm others and violate social expectations and norms. Derived from need to inhibit</i>	<i>The motivational goal of this type is safety, harmony and stability of society or relationships or of self</i>

<i>resources</i>		<i>pleasure associated with satisfying them</i>	<i>activation</i>	<i>independence</i>			<i>mode of behaviour becomes a symbol of the group's solidarity and an expression of its unique worth and hopefully its survival</i>	<i>inclinations that might be socially disruptive if personal interactions and group functioning are to run smoothly</i>	
Individual level Marker Values									
Social power, control over other	Ambitious, hard-working, aspiring	Pleasure, gratification of desires	An exciting life, stimulating experiences	Freedom of action and thoughts	Equality	Loyal, faithful to my friends, group	Respect for tradition, preservation of time honoured customs	Politeness, courtesy, good manners	Social order, stability of society
Wealth, material possessions money	Influential, having an impact on people and events	Enjoying life, food, sex, leisure etc	A varied life, filled with challenge, novelty and change	Creativity, uniqueness, imagination	A world at peace, free of war and conflict	Honest, genuine, sincere	Moderate, avoiding extremes of feeling or action	Self-discipline, self-restraint, resistance to temptation	National security, protection of my nation from enemies
Authority, the right to lead and command	Capable, competent, effective, efficient	Self-indulgent, doing pleasant things	Daring, seeking adventure, risk	Independent self-reliant, self-sufficient	Unity with nature, fitting into nature	Helpful, working for the welfare of others	Humble, modest, self-effacing	Honouring of parents and elders, showing respect	Reciprocation of favours, avoidance of indebtedness
Preserving my public image / face	Successful, achieving goals			Choosing own goals, selecting own purposes	Wisdom, a mature understanding of life	Responsible, dependable, reliable	Accepting my portion in life, submitting to life's circumstances	Obedience, dutiful, meeting obligations	Family security, safety for loved ones

				Curious, interested in everything, exploring	A world of beauty, of nature and the arts	Forgiving, willing to pardon others	Devout, holding to religious faith and belief		Clean, neat, tidy
					Social justice, correcting injustice, care for the weak				
					Broad-minded, tolerant of different ideas and beliefs				
					Protecting the environment, preserving nature				

Appendix 4

Blank coding table for values, climate change and business greening

i. Values

Power
Social power, control over others
Wealth, material possessions & money
Authority, the right to lead and command
Preserving my public image / face
Achievement
Ambitious, hard-working, aspiring
Influential, having an impact on people and events
Capable, competent, effective, efficient
Successful, achieving goals
Hedonism
Pleasure, gratification of desires
Enjoying life, food, sex, leisure etc
Self-indulgent, doing pleasant things
Stimulation
An exciting life, stimulating experiences
A varied life. Filled with challenge, novelty and change
Daring, seeking adventure, risk
Self-Direction
Freedom of action & thoughts
Creativity, uniqueness, imagination
Independent, self-reliant, self-sufficient
Choosing own goals, selecting own purposes
Curious, interested in everything
Universalism
Unity with nature, fitting into nature
Wisdom, a mature understanding of life
Equality
A world at peace, free of war and conflict
A world of beauty, of nature and the arts
Social justice, correcting injustice, care for the weak
Broadminded, tolerant of different ideas and beliefs

Protecting the environment, preserving nature
Benevolence
Loyal, faithful to my friends, group
Honest, genuine, sincere
Helpful, working for the welfare of others
Responsible, dependable, reliable
Forgiving, willing to pardon others
Tradition
Respect for tradition, preservation of time honoured customs
Moderate, avoiding extremes of feeling and action
Humble, modest, self-effacing
Accepting my portion in life, submitting to life's circumstances
Devout, holding to religious faith and belief
Conformity
Politeness, courtesy, good manners
Self-discipline, self-restraint, resistance to temptation
Honouring of parents and elders, showing respect
Obedience, dutiful, meeting obligations
Security
Social order, stability of society
National security, protection of my nation from enemies
Reciprocation of favours, avoidance of indebtedness
Family security, safety for loved ones
Clean, neat tidy

ii. Climate Change

Identity
Place
Self
Construction
Responsibility
Cues
Social Influences

iii. Business Greening

Balance of motivations
Link with climate change
Explicitly referenced Environmental Values
Actions
Barriers to action
On-going

Appendix 5

Example of completed coding tables (M25)

i. Values

Power
Social power, control over others <ul style="list-style-type: none">(M25) 'I mean don't get me wrong, I look after them and they look after me and they know it, but they also know damn well if I say something's got to be done it's got to be done, and if they step out of line, I say, it's got to be a tight ship, if you don't run it as a tight ship, any business, or any charity work, it will fail, it's got to be firm but fair. I mean I've had guys in Africa who have mucked me about, and I've kicked them straight off the site, and they're like, well my kids are going to go hungry tonight, and I'm like, yes, your points what? If your kids were important to you, you would have worked harder for me, not less.
Wealth, material possessions & money <ul style="list-style-type: none">(M25) 'We've found even greater niches in the market and exploited them to a huge extent. On the financial front, that's a hell of a mark-up, it doesn't take long to realise, the machine you buy for £600-700 you then rent out ten times at £600 a throw, you've made some money out of it' (p7)(M25) 'Education makes a difference to climate change and if you show people a way to make money without chopping down trees and killing animals; I hate to admit it but humans are very greedy, we're very good at making money. You show a man how to look after a mango tree by keeping it alive, trust me, he'll look after it like a baby... It's easy. It's money, it's greed but if you tap into it in the right direction, you'll get a lot of people following you very quickly' (p11)(M25) 'I would say in balance, it's, you know, it's no good making money if you trash the planet, but at the same time, let's be brutally honest, if you don't make money, you can't put dinner on the table, and if you do make enough money you can do something with it, and what you do with it, to me that makes the difference. I mean there's no reason why a good businessman can't make a very good living, or a good Christian company, God doesn't deny you having money, he just asks you to be sensible with it and make good use of it. And if you're making good use of it you should be blessed, you should get more, but then you

should be able to do more. Actually it comes onto the next thing, God says that if you get a lot of money he expects a lot more of you, so yes I'm doing quite well but it's now the next thing is I need to do even more for him, it doesn't give me an easy life it just makes it more complicated because there's more responsibility' (p12)

- (M25) 'Sustainability to me as a company that gets up to a certain level and doesn't want to grow anymore because you've got, you sustain, the money you need; you don't need a Lear jet parked in your back garden, really you have enough money to live on and you hold it at that level. I don't believe continuous growth and sustainability are compatible because I could easily have expanded and it was like no, we're at a sensible size, we need to sustain this kind of level. We haven't expanded the area because we don't want the company to grow more and there's no need for it to grow' (p7)

Authority, the right to lead and command

- (M25) re; main staff: 'are very much on board with the ideas and the whole concept of it and I knew both of them long before I started the business up and I headhunted them both in. Not only are they friends of mine but also their ideas and the way they do things is very similar' (p6)
- (M25) 'I mean, you know, you've got to make a living and, I mean unfortunately I say to people, I've got two heads and shoulders, I've got a business head and pleasure head, and there is a substantial difference between the two. If you see me in a situation where I've got to sit down and talk to my workforce because they've done something wrong, you wouldn't want to be around, because I will tear into them... if I don't run the business, Africa will suffer, what I do out there, so I've got to keep it going, if I don't get the business right my wife is going to suffer, if I don't get the business right, I mean it's no good collapsing a business, because my business sustains 17 people. So it's got to be running right, and if one person's going to let it down, to be honest, I'll get rid of them because I can't watch 17 people go under' (p13)
- (M25) 'I always like what the late President Lincoln once showed his people. They're all around a table, and he said look if you want to lead, this is how you do it, pull a shoe lace off, put it on the table, if you want to lead, he got one and he said push that piece of string. It went everywhere. And he said to the other person at the other table, pull that piece of string, he said now if you want to lead, you never push people, you pull them, and you stand out in front, and you've got to make that decision, you've got to make the, you've got to be the person

<p>blazing through the forest, because if you go first others will follow. I've always said this to my workforce, I would never ask them to do a job that I wouldn't do first, or that, unless I'm not fully qualified, but that I've done before them, and they know it' (p13)</p> <ul style="list-style-type: none"> • (M25) '...of course you do, you make money, then the people that you're trying to lead will make money, and they will follow, and they will follow, a lot of people follow what I say because they like me, but they will also follow if they know they're going to make a bit of money out of it, and you'd be surprised how many people over the years will always help do something, because they know they're going to make something out of it' (p13)
Preserving my public image / face
Achievement
Ambitious, hard-working, aspiring
Influential, having an impact on people and events
Capable, competent, effective, efficient
Successful, achieving goals
Self-Direction
<p>Freedom of action & thoughts</p> <ul style="list-style-type: none"> • (M25) (as in opposite to conformity) 'There is no waste paper or cardboard, that all gets recycled in the shopping centre...well whoever's going down to Sainsbury's just chucks it in their recycling because it's recycling, you know, I mean, to be honest, I'd be horrified if we now have to produce pieces of paper to say we put cardboard in a recycling centre' (p4) • (M25) '...Your logic is you've got to do something and you've got to start somewhere. But it is, you've got to start somewhere, and belief is a strong part of me, and there's probably a lot of people you've interviewed are scared to go, I believe in God, because they think it's namby pamby, personally I don't give a stuff, if you don't like what I say you can stick your fingers in your ears' (p9) • (M25) 'Well you see for me it's what I believe in, and to me, you don't stand behind a religion you stand in front of it. I go to church on Sunday, a lot of people will go to church on Sunday and not talk about it on Thursday, easy as that, that's it. I don't mean this flippantly, I really don't care what people think, it's my belief, and that's it, full stop' (p10)
Creativity, uniqueness, imagination
Independent, self-reliant, self-sufficient

- (M25) 'The person you see in the morning is the person who is going to have the greatest effect on your life, now deal with it. If you want to change things, do something about it and you'd be surprised at how much of a knock on effect that has...' (p9)

Choosing own goals, selecting own purposes

- (M25) 'I started my company up on ethics, not for money. The way we recycle is for ethics not for money' (p5)

Curious, interested in everything

Benevolence

Loyal, faithful to my friends, group

- (M25) 'As far as scrap is concerned, there's a corner of the area where we just throw it into a pile and every so often the person who owns it takes it to the dump. It does two things, first we can get rid of it instantly, secondly he gets a pinky out of it because he takes it down and he gets the money for it, so it's a nice two-way set up' (p3)
- (M25) 'We've got a skip to get rid of plastics. And there's a nice arrangement actually, it's where my boat is moored, we take the stuff and chuck them in their proper industrial skip and what we do in return is give them loads of company pens and biscuits. But again, everything is taken away properly, the only stuff is literally plastic packaging and it's like half a carrier bag a week' (p4)
- (M25) 'Well, put it this way, I say to a lot of people it's God's world, if you save a tree from falling down, that's his tree, look after it. If you save a child from drowning, look after it ... it doesn't matter what you do, if the reasons are sound and reasonable behind it, that you're doing it for good and especially if you've got a belief in God, is doing it for God, it's the same difference whether you're helping a kid in Africa or you're helping a poor old dog that's dying in the street, it's the same it doesn't make any difference' (p9)
- (M25) 'Well you see for me it's what I believe in, and to me, you don't stand behind a religion you stand in front of it...When you're taking stair lifts out for people. The other guys struggle with it because they're seeing all the sympathy cards, and I will connect with people and spend a good 20 minutes talking about God and beliefs, and to me, it suddenly opens up a complete new door, you've suddenly been able to talk to this person, and literally you're ministering to them, at the point of their bereavement; you're allowing them to talk about their loved one's dying. And I will connect quite happily with any religion, it's irrelevant, you

know, it's one God, that's it, full stop'(p10)
Honest, genuine, sincere <ul style="list-style-type: none"> (M25) 'Business should be built on a Christian base, or if you're Muslim on a Muslim base, whatever, you'll soon find religion guides very strongly how a business should be running, firm but fair, honesty, integrity, all of those virtues. People say you can't be honest in business, rubbish... I don't cheat' (p14)
Helpful, working for the welfare of others <ul style="list-style-type: none"> (M25) 'People don't realise it but of course the difference is you put (scrap metal) in a big pile and take a tonne to the scrap man, it's a £100. Now that wasn't the reason why we done it, we just thought, well, this is stupid, we're putting in to landfill when on the other side of the planet, they want metal, so' (p2) (M25) 'I set up a business really to help people, so I suppose if you look at it in the wide scheme of life, if you're helping people, you're helping people; the planet's a village. You can help everyone and if you're helping someone, it's got to be good for the environment; help is help'(p6)
Responsible, dependable, reliable <ul style="list-style-type: none"> (M25) 'if I don't run the business, Africa will suffer, what I do out there, so I've got to keep it going, if I don't get the business right my wife is going to suffer, if I don't get the business right, I mean it's no good collapsing a business, because my business sustains 17 people, if you include the partners and their kids, and everybody that, it's 17 people. So it's got to be running right, and if one person's going to let it down, to be honest, I'll get rid of them because I can't watch 17 people go under'(p13)
Forgiving, willing to pardon others

ii. climate change

Identity
Place
Self <ul style="list-style-type: none"> (M25) 'Well, put it this way, I say to a lot of people it's God's world, if you save a tree from falling down, that's his tree, look after it. If you save a child from drowning, look after it, it don't matter, you know, I mean people say, oh yes you do work in Africa... if you've got a belief in God, is doing it for God, it's the same difference whether you're helping a kid in Africa or you're helping a poor old dog that's dying in the street, it's the same it doesn't make any difference. Your logic is

you've got to do something and you've got to start somewhere... and belief is a strong part of me, and there's probably a lot of people you've interviewed are scared to go, I believe in God, because they think it's namby pamby, personally I don't give a stuff, if you don't like what I say you can stick your fingers in your ears' (p9)

Construction

Linked with sustainability / over use of resources

- (M25) 'Climate change and sustainability are linked because as soon as you go beyond sustainability, you're using more resources. You're using more resources you need machines to make that and then in comes climate change or global warming' (p8)

What's it called doesn't matter

- (M25) 'Now whether it's climate change or global warming, to be honest, I don't give a toot cahoot because they're all big names. All I can see is that we're using up things faster then we should do' (p8)

Carbon tax unnecessary & just about making money

- (M25) 'When they talk about global warming and increased carbon and increased this and that, then suddenly they start putting taxes on it and trying to make money out of it, whereas if they just say to people, well you know, just recycle, reuse, you'll find it's, probably near enough, enough' (p8)

Just need to be clever and stay a step ahead

- (M25) 'The climate is going to change, there's no question of it. It's a question of trying to be clever and trying to get one step ahead of it. For example we put insulation throughout the house, now ok it keeps you warm in winter but insulation goes the opposite way in summer, it keeps the house cool. And if the world gets warmer, well the house doesn't get warm, well it will get warmer but you know, it's not so bad' (p8)

Hyped by Government & science

- (M25) 'I think there is a bit of hype from the government and science. I think a lot of it is true, there are definitely problems out there and we are causing it, full stop. And whether it's climate change, I think, it's irrelevant: What's relevant is that we are using resources faster than we can replace them and also the way we're doing things is damaging the environment, and we need to wake up and think about it' (p11)

Nothing to do with social injustice

- (M25) 'Social injustice and climate change, I don't really see that quite the same. Yes, ok, someone in Africa is going to suffer more but that's the part of the world they live in. you know, it's not social injustice as such. You've got trade rules that are heavily against Africa but that's not climate change, that's a different issue altogether and if you made trade rules fairer, would it make any difference to climate change, I doubt it' (p11)

Education makes the difference

- (M25) 'Education makes a difference to climate change and if you show people a way to make money without chopping down trees and killing animals; I hate to admit it but humans are very greedy, we're very good at making money. You show a man how to look after a mango tree by keeping it alive, trust me, he'll look after it like a baby...so I wouldn't call it social injustice, I'd call it lack of education' (p11)

Responsibility

Starts with the man in the mirror

- (M25) '...what my business was also set up for, I do work out in Africa, voluntary work, and I've got land out there, and I knew that if the business was successful it would pay me to go out and do that work. Well I've taken it one step further, bought land out there, that's turned into a small plantation... the biggest reason for buying the land, was my bit of anti-global warming. You plant in 1 acre of trees, that's a hell of a difference to that 1 acre, and that stops the soil erosion and everything else that goes with it, so that was the main reason of buying the land...And the person who looks after it, Solomon and his family, have now suddenly got a cash crop, namely mangos... '(p8)
- (M25) re his work in Africa; 'That was a direct spin off of me reading about global warming and thinking, I've got to do something, and I don't care if it's a drop in the ocean, it's a drop in the right direction and that will do me. You can only do what you can so and you can't save the planet, but if everybody has the idea of trying to do something, it has a positive effect' (p8)
- (M25) 'We all live on the planet, and to me, if you see a problem you deal with it. And it's no good saying it's the government, it's the next person, yes it is the government, it I the next person, but it's also you, and I always liked what Michael Jackson used to say, start with the man in the mirror' (p9)
- (M25) 'The person you see in the morning is the person who is going to have the greatest effect on your life, now deal with it. If you want to change things, do something about it and you'd be surprised at how much of a knock on effect that

has because other people suddenly start to see you recycling, they start to see you putting in trees in Africa and we're teaching people and they're letting the trees grow and they see the logic in it. You've got to do something, you can't just let the world drift by' (p9)

- (M25) 'If I don't run the business, Africa will suffer, what I do out there, so I've got to keep it going, if I don't get the business right Sue's going to suffer, if I don't get the business right, I mean it's no good collapsing a business, because my business sustains 17 people. So it's got to be running right, and if one person's going to let it down, to be honest, I'll get rid of them because I can't watch 17 people go under' (p13)

Cues

Travel

- (M25) 'Travel, simple as that, I was travelling and I'll say it straight, I had a calling from God, well no it's a bit more than that, I was travelling on a truck, from London to Cape Town, half way round the journey the people who were running it, I lost faith in them, I didn't think they could take the truck through the Congo, one because it was a war zone and two, they, the two people that were running it were boy and girl friend, were bickering so much I thought, well if they can't keep their head straight just even to find a campsite, how the hell are they going to get a truck through the Congo? At the same time I had a strong calling from God that if I was to get off the truck, there was work for me to do, that's what happened, I ended up literally listening to that call, hooking up with a missionary, and then going up in the middle of nowhere doing work, and it's snowballed from there' (p9)

iii. Business Greening

Balance of motivations

Mix but more monetary than environmental

- (M25) 'Another major concern of course, is fuel prices' (p2)
- (M25) 'and the last one is an environmental consideration, but it was more of a spin off, it was a mixture of the two: Workshops are being built, or have been built, in the back gardens of two of the engineers (so they can work at home)... well of course it doesn't take long to work out there's a huge saving in fuel. If it's a saving in fuel, it's a saving on the environment. But to be fair, that was slightly more monetary based than environmentally based but obviously had the spin off that my guys now stroll out at 9 o'clock, they're at home, they're working, immediately, no excuse for being late really'

(p2-3)

- (M25) 'Well scrap metal is scrap metal; nobody ever bothers to check on that because, you'd have to be a bit of a nana nowadays to chuck metal away. You'd be surprised how you'll easily fill up the average bedroom with scrap steel, which is worth at today's prices, £300' (p3)

Helping people helps the environment

- (M25) 'I set up a business really to help people, so I suppose if you look at it in the wide scheme of life, if you're helping people, you're helping people; the planet's a village. You can help everyone and if you're helping someone, it's got to be good for the environment; help is help'(p6)

Link with climate change

- (M25) 'Climate change and sustainability are linked because as soon as you go beyond sustainability, you're using more resources. You're using more resources you need machines to make that and then in comes climate change or global warming' (p8)

Environmental Values

- (M25) 'When I was brought up we recycled everything. I think part of that was because money was tight, and when money's tight, you don't chuck stuff away' (p5)
- (M25) 'We just don't want to see it go in a landfill, it's such a waste it's stupid. You know, it doesn't make sense to me to do it. I started my company up on ethics, not for money. The way ' (p5)
- (M25) 'I would say in balance, it's, you know, it's no good making money if you trash the planet, but at the same time, let's be brutally honest, if you don't make money, you can't put dinner on the table, and if you do make enough money you can do something with it, and what you do with it, to me that makes the difference' (p12)

Actions

- (M25) 'if I told you how much rubbish we throw away, you'd be amazed. Bearing in mind we're a company turning over in excess of a third of a million a year, we probably throw away half a black bag of rubbish a week, that's it. Everything is recycled, wood, even down to nuts and bolts, screws are recycled, all batteries are recycled, all the machines are recycled. When a machine is no good, we strip it down for useable parts. The motors are put in a special pile because we get more money for them. The steel is then put into another pile, including like I say rusty nails and obviously aluminium is worth a lot of money but generally speaking it's just as easy to pile something and take it to the scrap man as chuck it in the bin' (p2)

- (M25) 'Another major concern of course, is fuel prices. We've got the guys to all slow down a bit and believe it or not, to make more use of fuel we've brought bigger vans, because you can go out on the road, you can load up 5 or 6 jobs and you don't have to keep going back to the yard each day. We've also fitted wind spoilers on the roof racks, again that cuts down on drag. It's actually a 5-6% saving in fuel which is phenomenal' (p2)
- (M25) 'and the last one is an environmental consideration, but it was more of a spin off, it was a mixture of the two: Workshops are being built, or have been built, in the back gardens of two of the engineers. They work from home, so the days they go quiet, instead of going off and driving to the workshop, which is over an hour's journey from them, they stay at home, they fix machines at home, repair stuff, well of course it doesn't take long to work out there's a huge saving in fuel. If it's a saving in fuel, it's a saving on the environment. But to be fair, that was slightly more monetary based than environmentally based but obviously had the spin off that my guys now stroll out at 9 o'clock, they're at home, they're working, immediately, no excuse for being late really' (p2-3)